GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: August 20, 2005, 00:10:37 ; Search time 168 Seconds
(without alignments)
1258.861 Million cell updates/sec

Title: US-10-649-852-32
Perfect score: 2229
Sequence: 1 MDSTIFEIIIDEFDANCSLL.....SIPTSPTRISFHSIKQTAAV 413

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1612378 seqs, 512079187 residues

Total number of hits satisfying chosen parameters: 1612378

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : UniProt_03:*
1: uniprot_sprot:*
2: uniprot_trembl:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	2229	100.0	413	1	CRF2_XENLA	O42603 xenopus lae
2	2051	92.0	411	2	Q68Y60	Q68y60 rana catesb
3	1963.5	88.1	412	2	Q7ZZZ2	Q7zzz2 gallus gall
4	1904.5	85.4	414	2	Q8AWA1	Q8awa1 oncorhynchu
5	1807	81.1	405	2	Q98UC1	Q98uc1 ameiurus ne
6	1804	80.9	411	1	CRF2_HUMAN	Q13324 homo sapien
7	1796.5	80.6	410	2	Q8WML9	Q8wml9 tupaia glis
8	1793	80.4	411	1	CRF2_RAT	P47866 rattus norv
9	1792	80.4	437	2	Q8WML8	Q8wml8 tupaia glis
10	1770.5	79.4	431	1	CRF2_MOUSE	Q60748 mus musculu
11	1582.5	71.0	428	2	Q98UC0	Q98uc0 ameiurus ne
12	1582	71.0	420	1	CRF1_CHICK	Q90812 gallus gall
13	1578.5	70.8	445	2	Q98UC2	Q98uc2 ameiurus ne
14	1566	70.3	415	2	Q76LL8	Q76ll8 macaca mula
15	1564.5	70.2	415	1	CRF1_XENLA	O42602 xenopus lae
16	1564.5	70.2	415	2	Q8K3R2	Q8k3r2 mesocricetu
17	1561.5	70.1	434	2	Q7T3S9	Q7t3s9 fugu rubrip
18	1559.5	70.0	430	2	Q8AWA2	Q8awa2 oncorhynchu
19	1559	69.9	415	2	Q8WMM0	Q8wmm0 tupaia glis
20	1556.5	69.8	415	1	CRF1_MOUSE	P35347 mus musculu
21	1553	69.7	415	2	Q9BGU4	Q9bgu4 bos taurus
22	1551.5	69.6	415	1	CRF1_RAT	P35353 rattus norv
23	1541.5	69.2	444	1	CRF1_HUMAN	P34998 homo sapien
24	1541.5	69.2	447	2	Q8NG71	Q8ng71 homo sapien
25	1539.5	69.1	416	2	Q68Y61	Q68y61 rana catesb
26	1523	68.3	415	1	CRF1_SHEEP	O62772 ovis aries
27	1409.5	63.2	329	2	Q70JV6	Q70jv6 cyprinus ca
28	950	42.6	277	2	Q8BJD9	Q8bjd9 m mus muscu
29	753	33.8	154	2	Q7TSA2	Q7tsa2 mesocricetu
30	721.5	32.4	504	2	Q9V716	Q9v716 drosophila
31	716.5	32.1	388	2	Q9V6C7	Q9v6c7 drosophila
32	705	31.6	441	1	DIHR_ACHDO	Q16983 acheta dome
33	704	31.6	188	2	Q7TSA1	Q7tsa1 mesocricetu
34	649	29.1	465	2	Q7Q773	Q7q773 anopheles g
35	641.5	28.8	641	2	Q65AS2	Q65as2 nilaparvata
36	636.5	28.6	631	2	Q65AS3	Q65as3 nilaparvata
37	619.5	27.8	350	2	Q8ML11	Q8ml11 drosophila
38	606	27.2	585	1	PTRR_DIDMA	P25107 didelphis m
39	597	26.8	585	1	PTRR_PIG	P50133 sus scrofa
40	596	26.7	516	1	CALR_RAT	P32214 rattus norv
41	595.5	26.7	478	1	CALR_CAVPO	O08893 cavia porce
42	593	26.6	515	1	CALR_MOUSE	Q60755 mus musculu
43	593	26.6	532	2	Q924D7	Q924d7 mus musculu
44	592.5	26.6	395	1	DIHR_MANSE	P35464 manduca sex
45	592.5	26.6	478	2	Q924D5	Q924d5 mus musculu

ALIGNMENTS

RESULT 1
CRF2_XENLA
ID CRF2_XENLA STANDARD; PRT; 413 AA.
AC O42603;
DT 15-JUL-1998 (Rel. 36, Created)
DT 15-JUL-1998 (Rel. 36, Last sequence update)
DT 25-OCT-2004 (Rel. 45, Last annotation update)
DE Corticotropin releasing factor receptor 2 precursor (CRF-R 2) (CRF2)
DE (Corticotropin-releasing hormone receptor 2) (CRH-R 2).
GN Name=CRF2;
OS Xenopus laevis (African clawed frog).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
OC Xenopodinae; Xenopus.
OX NCBI_TaxID=8355;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Brain, and Heart;
RX MEDLINE=97465573; PubMed=9326293;
RA Dautzenberg F.M., Dietrich K., Palchaudhuri M.R., Spiess J.;
RT "Identification of two corticotropin-releasing factor receptors from
RT Xenopus laevis with high ligand selectivity: unusual pharmacology of
RT the type 1 receptor.";
RL J. Neurochem. 69:1640-1649(1997).
CC -!- FUNCTION: This is a receptor for corticotropin releasing factor.
CC Shows high-affinity binding for urotensin I. The activity of this
CC receptor is mediated by G proteins which activate adenylyl cyclase
CC (By similarity).
CC -!- SUBCELLULAR LOCATION: Integral membrane protein.
CC -!- SIMILARITY: Belongs to the G-protein coupled receptor 2 family.
CC ---

CC ---
DR EMBL; Y14037; CAA74364.1; -.
DR InterPro; IPR000832; GPCR_secretin.
DR InterPro; IPR001879; hormn_receptor.
DR Pfam; PF00002; 7tm_2; 1.
DR Pfam; PF02793; HRM; 1.
DR PRINTS; PR00249; GPCRSECRETIN.
DR SMART; SM00008; HormR; 1.
DR PROSITE; PS00649; G_PROTEIN_RECEP_F2_1; 1.
DR PROSITE; PS00650; G_PROTEIN_RECEP_F2_2; 1.
DR PROSITE; PS50227; G_PROTEIN_RECEP_F2_3; 1.
DR PROSITE; PS50261; G_PROTEIN_RECEP_F2_4; 1.
KW G-protein coupled receptor; Glycoprotein; Signal; Transmembrane.
FT SIGNAL 1 ? Potential.
FT CHAIN ? 413 Corticotropin releasing factor receptor
FT 2.

```
FT   DOMAIN        ?    120       Extracellular (Potential).
FT   TRANSMEM    121    141       1 (Potential).
FT   DOMAIN      142    150       Cytoplasmic (Potential).
FT   TRANSMEM    151    170       2 (Potential).
FT   DOMAIN      171    187       Extracellular (Potential).
FT   TRANSMEM    188    211       3 (Potential).
FT   DOMAIN      212    225       Cytoplasmic (Potential).
FT   TRANSMEM    226    247       4 (Potential).
FT   DOMAIN      248    266       Extracellular (Potential).
FT   TRANSMEM    267    289       5 (Potential).
FT   DOMAIN      290    312       Cytoplasmic (Potential).
FT   TRANSMEM    313    332       6 (Potential).
FT   DOMAIN      333    347       Extracellular (Potential).
FT   TRANSMEM    348    367       7 (Potential).
FT   DOMAIN      368    413       Cytoplasmic (Potential).
FT   CARBOHYD     16     16       N-linked (GlcNAc. . .) (Potential).
FT   CARBOHYD     77     77       N-linked (GlcNAc. . .) (Potential).
FT   CARBOHYD     89     89       N-linked (GlcNAc. . .) (Potential).
FT   CARBOHYD     97     97       N-linked (GlcNAc. . .) (Potential).
SQ   SEQUENCE   413 AA;  48458 MW;  DAD422F0A96C4626 CRC64;

  Query Match             100.0%;  Score 2229;  DB 1;  Length 413;
  Best Local Similarity   100.0%;  Pred. No. 1e-157;
  Matches  413;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGPYCSATIDQIGTCWPRSLAG 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGPYCSATIDQIGTCWPRSLAG 60

Qy         61 ELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNKRKYALHYKIALI 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 ELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNKRKYALHYKIALI 120

Qy        121 INYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHNIHE 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 INYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHNIHE 180

Qy        181 SNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIPSPI 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIPSPI 240

Qy        241 IVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLRAST 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 IVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLRAST 300

Qy        301 TSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFVSVF 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFVSVF 360

Qy        361 YCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 YCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413


RESULT 2
Q68Y60
ID   Q68Y60      PRELIMINARY;      PRT;   411 AA.
AC   Q68Y60;
DT   25-OCT-2004 (TrEMBLrel. 28, Created)
DT   25-OCT-2004 (TrEMBLrel. 28, Last sequence update)
DT   25-OCT-2004 (TrEMBLrel. 28, Last annotation update)
DE   Cortcotropin releasing factor receptor type 2.
GN   Name=CRFR-2;
OS   Rana catesbeiana (Bull frog).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Amphibia; Batrachia; Anura; Neobatrachia; Ranoidea; Ranidae; Rana.
OX   NCBI_TaxID=8400;
RN   [1]
RP   SEQUENCE FROM N.A.
RA   Ito Y., Ogata D., Hasunuma I., Kikuyama S.;
RT   "molecular cloning of two corticotropin releasing factor receptors
RT   from bullfrog.";
RL   Submitted (AUG-2004) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AB188111; BAD36784.1; -.
DR   GO; GO:0004872; F:receptor activity; IEA.
DR   InterPro; IPR003053; CRF2_receptor.
DR   InterPro; IPR003051; CRF_receptor.
DR   InterPro; IPR000832; GPCR_secretin.
DR   InterPro; IPR001879; hormn_receptor.
DR   Pfam; PF00002; 7tm_2; 1.
DR   Pfam; PF02793; HRM; 1.
DR   PRINTS; PR01279; CRFRECEPTOR.
DR   PRINTS; PR01281; CRFRECEPTOR2.
DR   PRINTS; PR00249; GPCRSECRETIN.
DR   SMART; SM00008; HormR; 1.
DR   PROSITE; PS00649; G_PROTEIN_RECEP_F2_1; 1.
DR   PROSITE; PS00650; G_PROTEIN_RECEP_F2_2; 1.
DR   PROSITE; PS50227; G_PROTEIN_RECEP_F2_3; 1.
DR   PROSITE; PS50261; G_PROTEIN_RECEP_F2_4; 1.
KW   Receptor.
SQ   SEQUENCE   411 AA;  48152 MW;  96D64ED8A24C179B CRC64;

  Query Match             92.0%;  Score 2051;  DB 2;  Length 411;
  Best Local Similarity   92.3%;  Pred. No. 1.8e-144;
  Matches  381;  Conservative   15;  Mismatches   15;  Indels    2;  Gaps    2;

Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGPYCSATIDQIGTCWPRSLAG 60
              |:|||||| |||||||||||||:|||| : : :|  |:||:| ||||||||||||:||
Db          1 MESTIFEIFIDEFDANCSLLDAYQDSFL-TINHTFLPFDGPHCIATIDQIGTCWPRSIAG 59

Qy         61 ELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNKRKYALHYKIALI 120
              ||||||||||||||:|||| |:|||||||||||||||||||||| |||: ||||||||
Db         60 ELVERPCPDSFNGIKYNTTRAVFRECFENGTWASWMNYSQCVPILD-KRKHDLHYKIALI 118

Qy        121 INYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHNIHE 180
              |||||||||:|||||||||||||||||||||||||||||||||||||||||||||||||||
Db        119 INYLGHCISVLALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHNIHE 178

Qy        181 SNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIPSPI 240
              ||:|||||||||||||||||||||||||||||||||||||||||||| |||||||| ||
Db        179 KNEIWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVLLFIGWCIPCPI 238

Qy        241 IVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLRAST 300
              |: ||| ||: |||||||||||||||||| |||||||||||||||||||||||||||||
Db        239 IIAWAIGKLYNENEQCWIGKEPGKYIDYIYQGPVILVLLINFVFLFNIVRILMTKLRAST 298

Qy        301 TSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFVSVF 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        299 TSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFVSVF 358

Qy        361 YCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        359 YCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 411


RESULT 3
Q7ZZZ2
ID   Q7ZZZ2      PRELIMINARY;      PRT;   412 AA.
AC   Q7ZZZ2;
DT   01-JUN-2003 (TrEMBLrel. 24, Created)
DT   01-OCT-2003 (TrEMBLrel. 25, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Putative corticotropin-releasing hormone receptor type 2.
GN   Name=CRH-R2;
OS   Gallus gallus (Chicken).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
OC   Gallus.
OX   NCBI_TaxID=9031;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Cerebellum;
RX   PubMed=12970166; DOI=10.1210/en.2003-0526;
RA   De Groef B., Goris N., Arckens L., Kuhn E.R., Darras V.M.;
RT   "Corticotropin-releasing hormone (CRH)-induced thyrotropin release is
RT   directly mediated through CRH receptor type 2 on thyrotropes.";
```

```
RL   Endocrinology 144:5537-5544(2003).
DR   EMBL; AJ557031; CAD89534.2; -.
DR   GO; GO:0016020; C:membrane; IEA.
DR   GO; GO:0004930; F:G-protein coupled receptor activity; IEA.
DR   GO; GO:0004872; F:receptor activity; IEA.
DR   InterPro; IPR000832; GPCR_secretin.
DR   InterPro; IPR001879; hormn_receptor.
DR   Pfam; PF00002; 7tm_2; 1.
DR   Pfam; PF02793; HRM; 1.
DR   PRINTS; PR00249; GPCRSECRETIN.
DR   SMART; SM00008; HormR; 1.
DR   PROSITE; PS00650; G_PROTEIN_RECEP_F2_2; 1.
DR   PROSITE; PS50227; G_PROTEIN_RECEP_F2_3; 1.
DR   PROSITE; PS50261; G_PROTEIN_RECEP_F2_4; 1.
KW   Receptor.
SQ   SEQUENCE   412 AA;  48095 MW;  641B269460EC4041 CRC64;

  Query Match             88.1%;  Score 1963.5;  DB 2;  Length 412;
  Best Local Similarity   87.7%;  Pred. No. 5.7e-138;
  Matches  362;  Conservative   22;  Mismatches   28;  Indels    1;  Gaps    1;

Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGPYCSATIDQIGTCWPRSLAG 60
              || || : |::|||||  ||||  |:: | | | || || | ||:|| |||||||||: ||
Db          1 MDVTISQFILEEFDANRSLLD-LQETVLESFSISFLGFHGLYCNATTDQIGTCWPRASAG 59

Qy         61 ELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNKRKYALHYKIALI 120
              :|||||||: ||||:||||:| ||||  |||||| :||||| ||||:||||| |||||||
Db         60 KLVERPCPEFFNGIKYNTTKNAYRECLGNGTWASKINYSQCEPILDDKRKYAHHYKIALI 119

Qy        121 INYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHNIHE 180
              |||||||||: ||::||:|||||||||||||:||||||||||||:||||||||||||||
Db        120 INYLGHCISVGALIVAFMLFLCLRSIRCLRNVIHWNLITTFILRNVMWFLLQMIDHNIHE 179

Qy        181 SNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIPSPI 240
              ||| |||||||:|||||||||||||||||||||||||||||||||||||||||||||| ||
Db        180 SNEPWCRCITTVYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIPCPI 239

Qy        241 IVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLRAST 300
              || ||| ||:||||||| ||||||||||||| ||||||||||||||||||||||||||||
Db        240 IVAWAIGKLYYENEQCWFGKEPGKYIDYIYQGPVILVLLINFVFLFNIVRILMTKLRAST 299

Qy        301 TSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFVSVF 360
              ||||||||||||||||||||||||||||||||||:||||||||||||||||||||||||
Db        300 TSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDISQIVFIYFNSFLQSFQGFFVSVF 359

Qy        361 YCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        360 YCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 412


RESULT 4
Q8AWA1
ID   Q8AWA1      PRELIMINARY;      PRT;   414 AA.
AC   Q8AWA1;
DT   01-MAR-2003 (TrEMBLrel. 23, Created)
DT   01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
DT   01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DE   Corticotropin-releasing factor receptor type 2.
GN   Name=crfr2;
OS   Oncorhynchus keta (Chum salmon).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Actinopterygii; Neopterygii; Teleostei; Euteleostei;
OC   Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
OX   NCBI_TaxID=8018;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Heart;
RA   Pohl S., Darlison M.G., Lederis K., Richter D.;
RL   Submitted (MAR-2000) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AJ277158; CAC81754.1; -.
DR   GO; GO:0016020; C:membrane; IEA.
DR   GO; GO:0004930; F:G-protein coupled receptor activity; IEA.
DR   GO; GO:0004872; F:receptor activity; IEA.
DR   InterPro; IPR003053; CRF2_receptor.
DR   InterPro; IPR003051; CRF_receptor.
DR   InterPro; IPR000832; GPCR_secretin.
DR   InterPro; IPR001879; hormn_receptor.
DR   Pfam; PF00002; 7tm_2; 1.
DR   Pfam; PF02793; HRM; 1.
DR   PRINTS; PR01279; CRFRECEPTOR.
DR   PRINTS; PR01281; CRFRECEPTOR2.
DR   PRINTS; PR00249; GPCRSECRETIN.
DR   SMART; SM00008; HormR; 1.
DR   PROSITE; PS00650; G_PROTEIN_RECEP_F2_2; 1.
DR   PROSITE; PS50227; G_PROTEIN_RECEP_F2_3; 1.
DR   PROSITE; PS50261; G_PROTEIN_RECEP_F2_4; 1.
KW   Receptor.
SQ   SEQUENCE   414 AA;  48329 MW;  11FB2E9E4481CCC2 CRC64;

  Query Match             85.4%;  Score 1904.5;  DB 2;  Length 414;
  Best Local Similarity   83.8%;  Pred. No. 1.4e-133;
  Matches  347;  Conservative   30;  Mismatches   36;  Indels    1;  Gaps    1;

Qy          1 MDSTIFEIIIDEF-DANCSLLDAFQDSFLHSESSSFFGFEGPYCSATIDQIGTCWPRSLA 59
              ||:||::||  || | |||::|:|||||  : | |   |:| ||:|| |:||||||:|
Db          1 MDATIYQIIFGEFGDPNCSVMDSFQDSFYENASFSLMDFDGLYCNATTDEIGTCWPKSNT 60

Qy         60 GELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNKRKYALHYKIAL 119
              | :||||||:  ||::|||||: |||| :|||||   ||| | |||: |||| :||||||
Db         61 GRMVERPCPEYINGVKYNTTRSAYRECIDNGTWALKSNYSSCEPILEEKRKYPMHYKIAL 120

Qy        120 IINYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHNIH 179
              ||||||||||: |||:||:|||||||||||||||||||||||||||:||||||:||||||
Db        121 IINYLGHCISVGALVVAFILFLCLRSIRCLRNIIHWNLITTFILRNVMWFLLQLIDHNIH 180

Qy        180 ESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIPSP 239
              |||| ||| |||||||||||||||||||||||||||||||||||||:||||||||||| |
Db        181 ESNEPWCRLITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLKKWVFLFIGWCIPCP 240

Qy        240 IIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLRAS 299
              ||| ||| ||: |||||| |||||||||||||| ||||||||||||||||||||||||||
Db        241 IIVAWAIGKLYNENEQCWFGKEPGKYIDYIYQGPVILVLLINFVFLFNIVRILMTKLRAS 300

Qy        300 TTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFVSV 359
              |||||||||||||||||||||||||||||||||||:|||||||||||||||||||||||
Db        301 TTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDISQIVFIYFNSFLQSFQGFFVSV 360

Qy        360 FYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||||||||||||||||:|:||||||||||:|||||||||||||| ||
Db        361 FYCFLNGEVRSAARKRWHRWQDNHALRVRVARAMSLPTSPTRISFHSIKQTTAV 414


RESULT 5
Q98UC1
ID   Q98UC1      PRELIMINARY;      PRT;   405 AA.
AC   Q98UC1;
DT   01-JUN-2001 (TrEMBLrel. 17, Created)
DT   01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
DT   01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE   Corticotropin releasing factor receptor 2.
OS   Ameiurus nebulosus.
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Siluriformes;
OC   Ictaluridae; Ameiurus.
OX   NCBI_TaxID=27778;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=21066341; PubMed=11145609; DOI=10.1210/en.142.1.446;
RA   Arai M., Assil I.Q., Abou-Samra A.B.;
RT   "Characterization of three corticotropin-releasing factor receptors in
RT   catfish: a novel third receptor is predominantly expressed in
RT   pituitary and urophysis.";
RL   Endocrinology 142:446-454(2001).
DR   EMBL; AF229360; AAK01069.1; -.
DR   GO; GO:0016020; C:membrane; IEA.
DR   GO; GO:0004930; F:G-protein coupled receptor activity; IEA.
```

```
DR   GO; GO:0004872; F:receptor activity; IEA.
DR   InterPro; IPR003053; CRF2_receptor.
DR   InterPro; IPR003051; CRF_receptor.
DR   InterPro; IPR000832; GPCR_secretin.
DR   InterPro; IPR001879; hormn_receptor.
DR   Pfam; PF00002; 7tm_2; 1.
DR   Pfam; PF02793; HRM; 1.
DR   PRINTS; PR01279; CRFRECEPTOR.
DR   PRINTS; PR01281; CRFRECEPTOR2.
DR   PRINTS; PR00249; GPCRSECRETIN.
DR   SMART; SM00008; HormR; 1.
DR   PROSITE; PS00650; G_PROTEIN_RECEP_F2_2; 1.
DR   PROSITE; PS50227; G_PROTEIN_RECEP_F2_3; 1.
DR   PROSITE; PS50261; G_PROTEIN_RECEP_F2_4; 1.
KW   Receptor.
SQ   SEQUENCE   405 AA;  46823 MW;  E05E96BCFEAD5CC5 CRC64;

  Query Match             81.1%;  Score 1807;  DB 2;  Length 405;
  Best Local Similarity   79.9%;  Pred. No. 2.4e-126;
  Matches  330;  Conservative   33;  Mismatches   42;  Indels    8;  Gaps    2;

Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGPYCSATIDQIGTCWPRSLAG 60
              |: :: |::    : |||| ||| |    : | :       ||:|| |:||||||| ||
Db          1 MEVSLLELL--SVEVNCSLADAFGDPAYGNASDAL------YCNATADEIGTCWPRSGAG 52

Qy         61 ELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNKRKYALHYKIALI 120
               :| |||||  ||::||:||: |||| |||||  :||| | |||: |||| :|||||||
Db         53 RVVARPCPDFINGVKYNSTRSAYRECLENGTWAFKINYSSCEPILEEKRKYPVHYKIALI 112

Qy        121 INYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHNIHE 180
              |||||||||: |||||||:|||||||||||||:|||||||||||||||| |||:|||||||
Db        113 INYLGHCISVGALVIAFVLFLCLRSIRCLRNVIHWNLITTFILRNIMWLLLQLIDHNIHE 172

Qy        181 SNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIPSPI 240
               || ||| |||:|||||||||||||||||||||||||||||||||||||||||||||| |:
Db        173 RNEPWCRLITTVYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIPCPV 232

Qy        241 IVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLRAST 300
              |: ||: ||: |||||| |||||||:|||||| ||:||||||||||||||||||||||||
Db        233 IIAWAVGKLYNENEQCWFGKEPGKYVDYIYQGPVIVVLLINFVFLFNIVRILMTKLRAST 292

Qy        301 TSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFVSVF 360
              ||||||||||||||||||||||||||||||||:||:||||||||||||||||||||||||
Db        293 TSETIQYRKAVKATLVLLPLLGITYMLFFVNPGDDDISQIVFIYFNSFLQSFQGFFVSVF 352

Qy        361 YCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||||||| |||||||||:|:|||||||||||||||||||||| | ||
Db        353 YCFLNGEVRSAVRKRWHRWQDNHALRVRVARAMSIPTSPTRISFHSIKHTTAV 405


RESULT 6
CRF2_HUMAN
ID   CRF2_HUMAN     STANDARD;      PRT;   411 AA.
AC   Q13324; O43461; Q99431;
DT   01-NOV-1997 (Rel. 35, Created)
DT   30-MAY-2000 (Rel. 39, Last sequence update)
DT   25-OCT-2004 (Rel. 45, Last annotation update)
DE   Corticotropin releasing factor receptor 2 precursor (CRF-R 2) (CRF2)
DE   (Corticotropin-releasing hormone receptor 2) (CRH-R 2).
GN   Name=CRHR2; Synonyms=CRF2R, CRH2R;
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A. (ISOFORM CRF2-ALPHA).
RX   MEDLINE=96107120; PubMed=8536644; DOI=10.1210/en.137.1.72;
RA   Liaw C.W., Lovenberg T.W., Barry G., Oltersdorf T., Grigoriadis D.E.,
RA   de Souza E.B.;
RT   "Cloning and characterization of the human corticotropin-releasing
RT   factor-2 receptor complementary deoxyribonucleic acid.";
RL   Endocrinology 137:72-77(1996).
RN   [2]
RP   SEQUENCE FROM N.A. (ISOFORM CRF2-BETA).
RC   TISSUE=Amygdala;
RA   Kostich W.A., Chen A., Sperle K., Horlick R.A., Patterson J.,
RA   Hyde T.M., Largent B.L.;
RT   "Molecular cloning of the human CRH2B receptor isoform: divergence
RT   from the rodent isoform in sequence and expression pattern.";
RL   Submitted (JUN-1997) to the EMBL/GenBank/DDBJ databases.
RN   [3]
RP   SEQUENCE FROM N.A. (ISOFORM CRF2-GAMMA).
RC   TISSUE=Amygdala;
RX   MEDLINE=98381934; PubMed=9717834; DOI=10.1210/me.12.8.1077;
RA   Kostich W.A., Chen A., Sperle K., Largent B.L.;
RT   "Molecular identification and analysis of a novel human corticotropin-
RT   releasing factor (CRF) receptor: the CRF2gamma receptor.";
RL   Mol. Endocrinol. 12:1077-1085(1998).
RN   [4]
RP   SEQUENCE FROM N.A. (ISOFORMS CRF2-ALPHA AND CRF2-GAMMA).
RA   Andrews S., Langston Y., Stoneking T., Maupin R.;
RL   Submitted (JUN-1998) to the EMBL/GenBank/DDBJ databases.
RN   [5]
RP   SEQUENCE FROM N.A. (ISOFORM CRF2-ALPHA).
RA   Suwa M., Sato T., Okouchi I., Arita M., Futami K., Matsumoto S.,
RA   Tsutsumi S., Aburatani H., Asai K., Akiyama Y.;
RT   "Genome-wide discovery and analysis of human seven transmembrane helix
RT   receptor genes.";
RL   Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases.
RN   [6]
RP   SEQUENCE OF 1-88 FROM N.A. (ISOFORM CRF2-BETA).
RC   TISSUE=Skeletal muscle;
RX   MEDLINE=97342544; PubMed=9199241; DOI=10.1016/S0167-4781(97)00047-X;
RA   Valdenaire O., Giller T., Breu V., Gottowik J., Kilpatrick G.;
RT   "A new functional isoform of the human CRF2 receptor for
RT   corticotropin-releasing factor.";
RL   Biochim. Biophys. Acta 1352:129-132(1997).
CC   -!- FUNCTION: This is a receptor for corticotropin releasing factor.
CC       Shows high-affinity CRF binding. Also binds to urocortin I, II and
CC       III. The activity of this receptor is mediated by G proteins which
CC       activate adenylyl cyclase.
CC   -!- SUBCELLULAR LOCATION: Integral membrane protein.
CC   -!- ALTERNATIVE PRODUCTS:
CC       Event=Alternative splicing; Named isoforms=3;
CC       Name=CRF2-alpha;
CC         IsoId=Q13324-1; Sequence=Displayed;
CC       Name=CRF2-beta;
CC         IsoId=Q13324-2; Sequence=VSP_001999;
CC       Name=CRF2-gamma;
CC         IsoId=Q13324-3; Sequence=VSP_002000;
CC   -!- SIMILARITY: Belongs to the G-protein coupled receptor 2 family.
CC   ---------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC   the European Bioinformatics Institute. There are no restrictions on its
CC   use by non-profit institutions as long as its content is in no way
CC   modified and this statement is not removed. Usage by and for commercial
CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; U34587; AAA91320.1; -.
DR   EMBL; AF011406; AAB94503.1; -.
DR   EMBL; AF019381; AAB94562.1; -.
DR   EMBL; AC004976; AAC71653.1; -.
DR   EMBL; AC004976; AAC71654.1; -.
DR   EMBL; AB065699; BAC05922.1; -.
DR   EMBL; Y10151; CAA71235.1; -.
DR   Genew; HGNC:2358; CRHR2.
DR   MIM; 602034; -.
DR   GO; GO:0005887; C:integral to plasma membrane; TAS.
DR   GO; GO:0015056; F:corticotrophin-releasing factor receptor ac. . .; TAS.
DR   GO; GO:0007188; P:G-protein signaling, coupled to cAMP nucleo. . .; TAS.
DR   InterPro; IPR000832; GPCR_secretin.
DR   InterPro; IPR001879; hormn_receptor.
DR   Pfam; PF00002; 7tm_2; 1.
DR   Pfam; PF02793; HRM; 1.
```

```
DR   PRINTS; PR00249; GPCRSECRETIN.
DR   SMART; SM00008; HormR; 1.
DR   PROSITE; PS00649; G_PROTEIN_RECEP_F2_1; 1.
DR   PROSITE; PS00650; G_PROTEIN_RECEP_F2_2; 1.
DR   PROSITE; PS50227; G_PROTEIN_RECEP_F2_3; 1.
DR   PROSITE; PS50261; G_PROTEIN_RECEP_F2_4; 1.
KW   Alternative splicing; G-protein coupled receptor; Glycoprotein;
KW   Signal; Transmembrane.
FT   SIGNAL        1     17       Potential.
FT   CHAIN        18    411       Corticotropin releasing factor receptor
FT                                 2.
FT   DOMAIN       18    118       Extracellular (Potential).
FT   TRANSMEM    119    139       1 (Potential).
FT   DOMAIN      140    148       Cytoplasmic (Potential).
FT   TRANSMEM    149    168       2 (Potential).
FT   DOMAIN      169    185       Extracellular (Potential).
FT   TRANSMEM    186    209       3 (Potential).
FT   DOMAIN      210    223       Cytoplasmic (Potential).
FT   TRANSMEM    224    245       4 (Potential).
FT   DOMAIN      246    264       Extracellular (Potential).
FT   TRANSMEM    265    287       5 (Potential).
FT   DOMAIN      288    310       Cytoplasmic (Potential).
FT   TRANSMEM    311    330       6 (Potential).
FT   DOMAIN      331    345       Extracellular (Potential).
FT   TRANSMEM    346    365       7 (Potential).
FT   DOMAIN      366    411       Cytoplasmic (Potential).
FT   CARBOHYD     41     41       N-linked (GlcNAc. . .) (Potential).
FT   CARBOHYD     74     74       N-linked (GlcNAc. . .) (Potential).
FT   CARBOHYD     86     86       N-linked (GlcNAc. . .) (Potential).
FT   CARBOHYD     94     94       N-linked (GlcNAc. . .) (Potential).
FT   VARSPLIC      1     34       MDAALLHSLLEANCSLALAEELLLDGWGPPLDPE -> MRG
FT                                 PSGPPGLLYVPHLLLCLLCLLPPPLQYAAGQSQMPKDQPLW
FT                                 ALLEQYCHTIMTLTNLS (in isoform CRF2-beta).
FT                                 /FTId=VSP_001999.
FT   VARSPLIC      1     34       MDAALLHSLLEANCSLALAEELLLDGWGPPLDPE -> MGR
FT                                 EPWPEDRDLGFPQLFCQ (in isoform CRF2-
FT                                 gamma).
FT                                 /FTId=VSP_002000.
FT   CONFLICT    185    185       R -> H (in Ref. 1).
SQ   SEQUENCE   411 AA;  47687 MW;  96B99A93594CF07F CRC64;

  Query Match             80.9%;  Score 1804;  DB 1;  Length 411;
  Best Local Similarity   80.0%;  Pred. No. 4.1e-126;
  Matches  333;  Conservative   33;  Mismatches   42;  Indels    8;  Gaps    4;

Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGP--YCSATIDQIGTCWPRSL 58
              ||: :   ::   :|||||  |  : |          |||  ||: |:||||||||||
Db          1 MDAALLHSLL---EANCSL--ALAEELLLDGWGPPLDPEGPYSYCNTTLDQIGTCWPRSA 55

Qy         59 AGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNK-RKYALHYKI 117
              || |||||||: |||::|||||| |||| ||||||| :|||| |||:| ||| |||:|
Db         56 AGALVERPCPEYFNGVKYNTTRNAYRECLENGTWASKINYSQCEPILDDKQRKYDLHYRI 115

Qy        118 ALIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHN 177
              ||::|||||:|: ||| |||||| |||||||||:|||||||||||||:||||||::||
Db        116 ALVVNYLGHCVSVAALVAAFLLFLALRSIRCLRNVIHWNLITTFILRNVMWFLLQLVDHE 175

Qy        178 IHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIP 237
              :|||||||||||:|||||||||||||||||||||||||||::||| :|||||||||
Db        176 VHESNEVWCRCITTIFNYFVVTNFFWMFVEGCYLHTAIVMTYSTERLRKCLFLFIGWCIP 235

Qy        238 SPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLR 297
               |||| ||| ||:||||||| |||||  :|||||| :|||||||||||||||||||||
Db        236 FPIIVAWAIGKLYYENEQCWFGKEPGDLVDYIYQGPIILVLLINFVFLFNIVRILMTKLR 295

Qy        298 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFV 357
              |||||||||||||||||||||||||||||||||||||||||:|||:|||||||||||||
Db        296 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDLSQIMFIYFNSFLQSFQGFFV 355

Qy        358 SVFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||| ||||||| |||||||||||||| :|||||||||||||||||||||||||
Db        356 SVFYCFFNGEVRSAVRKRWHRWQDHHSLRVPMARAMSIPTSPTRISFHSIKQTAAV 411
```

```
RESULT 7
Q8WML9
ID   Q8WML9      PRELIMINARY;      PRT;   410 AA.
AC   Q8WML9;
DT   01-MAR-2002 (TrEMBLrel. 20, Created)
DT   01-MAR-2002 (TrEMBLrel. 20, Last sequence update)
DT   01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE   Corticotropin releasing factor type 2A receptor.
GN   Name=crf2a;
OS   Tupaia glis belangeri (Common tree shrew).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Scandentia; Tupaiidae; Tupaia.
OX   NCBI_TaxID=37347;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=99288234; PubMed=10336722;
RA   Palchaudhuri M.R., Hauger R.L., Wille S., Fuchs E., Dautzenberg F.M.;
RT   "Isolation and pharmacological characterization of two functional
RT   splice variants of corticotropin-releasing factor type 2 receptor from
RT   the tree shrew (Tupaia belangeri).";
RL   J. Neuroendocrinol. 11:419-428(1999).
RN   [2]
RP   SEQUENCE FROM N.A.
RA   Dautzenberg F.M.;
RL   Submitted (DEC-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AJ422242; CAD19578.1; -.
DR   GO; GO:0016020; C:membrane; IEA.
DR   GO; GO:0004930; F:G-protein coupled receptor activity; IEA.
DR   GO; GO:0004872; F:receptor activity; IEA.
DR   Pfam; PF00002; 7tm_2; 1.
DR   Pfam; PF02793; HRM; 1.
DR   PRINTS; PR01279; CRFRECEPTOR.
DR   PRINTS; PR01281; CRFRECEPTOR2.
DR   PRINTS; PR00249; GPCRSECRETIN.
DR   SMART; SM00008; HormR; 1.
DR   PROSITE; PS00649; G_PROTEIN_RECEP_F2_1; 1.
DR   PROSITE; PS00650; G_PROTEIN_RECEP_F2_2; 1.
DR   PROSITE; PS50227; G_PROTEIN_RECEP_F2_3; 1.
DR   PROSITE; PS50261; G_PROTEIN_RECEP_F2_4; 1.
KW   Receptor.
SQ   SEQUENCE   410 AA;  47613 MW;  09AB660341A63DDC CRC64;

  Query Match             80.6%;  Score 1796.5;  DB 2;  Length 410;
  Best Local Similarity   79.0%;  Pred. No. 1.5e-125;
  Matches  328;  Conservative   34;  Mismatches   46;  Indels    7;  Gaps    3;

Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGP--YCSATIDQIGTCWPRSL 58
              ||: :   ::   :|||||     :  |           |||  ||: |:||||||||||
Db          1 MDAALLHSLL---EANCSL--ELAEELLLDGWGPPLDPEGPYSYCNTTLDQIGTCWPRSA 55

Qy         59 AGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNKRKYALHYKIA 118
              || |||||||: |||::||  ||| |||| ||||||| :|||| |||:|||| |||:||
Db         56 AGALVERPCPEYFNGVKYNATRNAYRECLENGTWASRINYSQCEPILDDKRKYDLHYRIA 115

Qy        119 LIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHNI 178
              |::|||||:|: ||| |||||| |||||||||:|||||||||||||: |||||:||| :
Db        116 LVVNYLGHCVSMAALVAAFLLFLALRSIRCLRNVIHWNLITTFILRNVTWFLLQLIDHEV 175

Qy        179 HESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIPS 238
              |||||||||||||:|||||||||||||||||||||||||::||||:|:|||||:|
Db        176 HESNEVWCRCITTIFNYFVVTNFFWMFVEGCYLHTAIVMTYSTERLRKWLFIFIGWCVPC 235

Qy        239 PIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLRA 298
              |||: ||| ||:|||:||| |||||  :|||||| :||||||| |||||||||||||||
Db        236 PIIIAWAIGKLYYENKQCWFGKEPGDLVDYIYQGPIILVLLINLVFLFNIVRILMTKLRA 295

Qy        299 STTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFVS 358
              || |||||||||||||||||||||||||||||||||||:|||||||||||||||||||||
Db        296 STESETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDLSQIVFIYFNSFLQSFQGFFVS 355

Qy        359 VFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              ||||| ||||||| |||||||||||||| ||||||||||||||||||||||||||
```

```
Db        356 VFYCFFNGEVRSALRKRWHRWQDHHSLRVPVARAMSIPTSPTRISFHSIKQTAAV 410


RESULT 8
CRF2_RAT
ID   CRF2_RAT       STANDARD;      PRT;   411 AA.
AC   P47866;
DT   01-FEB-1996 (Rel. 33, Created)
DT   01-FEB-1996 (Rel. 33, Last sequence update)
DT   25-OCT-2004 (Rel. 45, Last annotation update)
DE   Corticotropin releasing factor receptor 2 precursor (CRF-R 2) (CRF2)
DE   (Corticotropin-releasing hormone receptor 2) (CRH-R 2).
GN   Name=Crhr2; Synonyms=Crf2r;
OS   Rattus norvegicus (Rat).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OX   NCBI_TaxID=10116;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=Sprague-Dawley; TISSUE=Hypothalamus, and Lung;
RX   MEDLINE=95148632; PubMed=7846062;
RA   Lovenberg T.W., Liaw C.W., Grigoriadis D.E., Clevenger W.,
RA   Chalmers D.T., de Souza E.B., Oltersdorf T.;
RT   "Cloning and characterization of a functionally distinct
RT   corticotropin-releasing factor receptor subtype from rat brain.";
RL   Proc. Natl. Acad. Sci. U.S.A. 92:836-840(1995).
RN   [2]
RP   ERRATUM.
RA   Lovenberg T.W., Liaw C.W., Grigoriadis D.E., Clevenger W.,
RA   Chalmers D.T., de Souza E.B., Oltersdorf T.;
RL   Proc. Natl. Acad. Sci. U.S.A. 92:5759-5759(1995).
CC   -!- FUNCTION: This is a receptor for corticotropin releasing factor.
CC       Shows high-affinity CRF binding. Also binds to urocortin I, II and
CC       III. The activity of this receptor is mediated by G proteins which
CC       activate adenylyl cyclase.
CC   -!- SUBCELLULAR LOCATION: Integral membrane protein.
CC   -!- ALTERNATIVE PRODUCTS:
CC       Event=Alternative splicing; Named isoforms=2;
CC       Name=CRF2-alpha;
CC         IsoId=P47866-1; Sequence=Displayed;
CC         Note=Major isoform;
CC       Name=CRF2-beta;
CC         IsoId=P47866-2; Sequence=VSP_002001;
CC   -!- TISSUE SPECIFICITY: Predominantly expressed in limbic regions of
CC       the brain such as the lateral septum, the entorhinal cortex, the
CC       hypothalamic ventromedial nucleus and several amygdaloid nuclei.
CC       Also detectable in lung, kidney and heart.
CC   -!- SIMILARITY: Belongs to the G-protein coupled receptor 2 family.
CC   ---------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC   the European Bioinformatics Institute. There are no restrictions on its
CC   use by non-profit institutions as long as its content is in no way
CC   modified and this statement is not removed. Usage by and for commercial
CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; U16253; AAC52159.1; -.
DR   PIR; A55610; A55610.
DR   RGD; 70547; Crhr2.
DR   InterPro; IPR000832; GPCR_secretin.
DR   InterPro; IPR001879; hormn_receptor.
DR   Pfam; PF00002; 7tm_2; 1.
DR   Pfam; PF02793; HRM; 1.
DR   PRINTS; PR00249; GPCRSECRETIN.
DR   SMART; SM00008; HormR; 1.
DR   PROSITE; PS00649; G_PROTEIN_RECEP_F2_1; 1.
DR   PROSITE; PS00650; G_PROTEIN_RECEP_F2_2; 1.
DR   PROSITE; PS50227; G_PROTEIN_RECEP_F2_3; 1.
DR   PROSITE; PS50261; G_PROTEIN_RECEP_F2_4; 1.
KW   Alternative splicing; G-protein coupled receptor; Glycoprotein;
KW   Signal; Transmembrane.
FT   SIGNAL        1     17       Potential.
FT   CHAIN        18    411       Corticotropin releasing factor receptor
FT                                2.
FT   DOMAIN       18    118       Extracellular (Potential).
FT   TRANSMEM    119    139       1 (Potential).
FT   DOMAIN      140    148       Cytoplasmic (Potential).
FT   TRANSMEM    149    168       2 (Potential).
FT   DOMAIN      169    185       Extracellular (Potential).
FT   TRANSMEM    186    209       3 (Potential).
FT   DOMAIN      210    223       Cytoplasmic (Potential).
FT   TRANSMEM    224    245       4 (Potential).
FT   DOMAIN      246    264       Extracellular (Potential).
FT   TRANSMEM    265    287       5 (Potential).
FT   DOMAIN      288    310       Cytoplasmic (Potential).
FT   TRANSMEM    311    330       6 (Potential).
FT   DOMAIN      331    345       Extracellular (Potential).
FT   TRANSMEM    346    365       7 (Potential).
FT   DOMAIN      366    411       Cytoplasmic (Potential).
FT   CARBOHYD     41     41       N-linked (GlcNAc. . .) (Potential).
FT   CARBOHYD     74     74       N-linked (GlcNAc. . .) (Potential).
FT   CARBOHYD     86     86       N-linked (GlcNAc. . .) (Potential).
FT   CARBOHYD     94     94       N-linked (GlcNAc. . .) (Potential).
FT   VARSPLIC      1     34       MDAALLLSLLEANCSLALAEELLLDGWGEPPDPE -> MGH
FT                                PGSLPSAQLLLCLYSLLPLLQVAQPGRPLQDQPLWTLLEQY
FT                                CHRTTTRNFS (in isoform CRF2-beta).
FT                                /FTId=VSP_002001.
SQ   SEQUENCE   411 AA;  47706 MW;  1C6E85801BC94469 CRC64;

  Query Match             80.4%;  Score 1793;  DB 1;  Length 411;
  Best Local Similarity   80.0%;  Pred. No. 2.7e-125;
  Matches  333;  Conservative   30;  Mismatches   45;  Indels    8;  Gaps    4;

Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGP--YCSATIDQIGTCWPRSL 58
              ||:    :::   :|||||  |  :  |          |||  ||: |:|||||||:|
Db          1 MDAA---LLLSLLEANCSL--ALAEELLLDGWGEPPDPEGPYSYCNTTLDQIGTCWPQSA 55

Qy         59 AGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNK-RKYALHYKI 117
               | |||||||: |||||:|||||| |||| ||||||| :||| | ||||:| ||| |||:|
Db         56 PGALVERPCPEYFNGIKYNTTRNAYRECLENGTWASRINYSHCEPILDDKQRKYDLHYRI 115

Qy        118 ALIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHN 177
              |||||||||:|::||| |||||| |||||||||:|||||||||||||| |||||:|||
Db        116 ALIINYLGHCVSVVALVAAFLLFLVLRSIRCLRNVIHWNLITTFILRNITWFLLQLIDHE 175

Qy        178 IHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIP 237
              :|| |||||||:|||:|||||||||||||||||||||||||||: ||||:|||||||||
Db        176 VHEGNEVWCRCVTTIFNYFVVTNFFWMFVEGCYLHTAIVMTYSTEHLRKWLFLFIGWCIP 235

Qy        238 SPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLR 297
              |||| ||: ||:||||||| |||||  :|||||| :|||||||||||||||||||||||
Db        236 CPIIVAWAVGKLYYENEQCWFGKEPGDLVDYIYQGPIILVLLINFVFLFNIVRILMTKLR 295

Qy        298 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFV 357
              |||||||||||||||||||||||||||||||||||||||||:|||||||||||||||||||
Db        296 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDLSQIVFIYFNSFLQSFQGFFV 355

Qy        358 SVFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||| ||||||| ||||||||||:||| ||||||||||||||||||||||||||
Db        356 SVFYCFFNGEVRSALRKRWHRWQDHHALRVPVARAMSIPTSPTRISFHSIKQTAAV 411


RESULT 9
Q8WML8
ID   Q8WML8      PRELIMINARY;      PRT;   437 AA.
AC   Q8WML8;
DT   01-MAR-2002 (TrEMBLrel. 20, Created)
DT   01-MAR-2002 (TrEMBLrel. 20, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Corticotropin releasing factor type 2B receptor.
GN   Name=crf2b;
OS   Tupaia glis belangeri (Common tree shrew).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Scandentia; Tupaiidae; Tupaia.
OX   NCBI_TaxID=37347;
```

```
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=99288234; PubMed=10336722;
RA   Palchaudhuri M.R., Hauger R.L., Wille S., Fuchs E., Dautzenberg F.M.;
RT   "Isolation and pharmacological characterization of two functional
RT   splice variants of corticotropin-releasing factor type 2 receptor from
RT   the tree shrew (Tupaia belangeri).";
RL   J. Neuroendocrinol. 11:419-428(1999).
RN   [2]
RP   SEQUENCE FROM N.A.
RA   Dautzenberg F.M.;
RL   Submitted (DEC-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AJ422243; CAD19579.1; -.
DR   GO; GO:0016020; C:membrane; IEA.
DR   GO; GO:0004930; F:G-protein coupled receptor activity; IEA.
DR   GO; GO:0004872; F:receptor activity; IEA.
DR   Pfam; PF00002; 7tm_2; 1.
DR   Pfam; PF02793; HRM; 1.
DR   PRINTS; PR01279; CRFRECEPTOR.
DR   PRINTS; PR01281; CRFRECEPTOR2.
DR   PRINTS; PR00249; GPCRSECRETIN.
DR   SMART; SM00008; HormR; 1.
DR   PROSITE; PS00649; G_PROTEIN_RECEP_F2_1; UNKNOWN_1.
DR   PROSITE; PS00650; G_PROTEIN_RECEP_F2_2; 1.
DR   PROSITE; PS50227; G_PROTEIN_RECEP_F2_3; 1.
DR   PROSITE; PS50261; G_PROTEIN_RECEP_F2_4; 1.
KW   Receptor.
SQ   SEQUENCE   437 AA;  50329 MW;  E4721B7D880E1B07 CRC64;

  Query Match             80.4%;  Score 1792;  DB 2;  Length 437;
  Best Local Similarity   85.1%;  Pred. No. 3.4e-125;
  Matches  320;  Conservative   29;  Mismatches   25;  Indels    2;  Gaps    1;

Qy         40 GP--YCSATIDQIGTCWPRSLAGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMN 97
              ||  ||: |:||||||||||| || |:|||||: |||::|| ||| |||| ||||||| :|
Db         62 GPYSYCNTTLDQIGTCWPRSAAGALLERPCPEYFNGVKYNATRNAYRECLENGTWASRIN 121

Qy         98 YSQCVPILDNKRKYALHYKIALIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNL 157
              |||| ||||:|||| |||:|||::|||||:|: ||| |||||| |||||||||:|||||
Db        122 YSQCEPILDDKRKYDLHYRIALVVNYLGHCVSMAALVAAFLLFLALRSIRCLRNVIHWNL 181

Qy        158 ITTFILRNIMWFLLQMIDHNIHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVM 217
              ||||||||: |||||:||| :|||||||||||||:|||||||||||||||||||||||||
Db        182 ITTFILRNVTWFLLQLIDHEVHESNEVWCRCITTIFNYFVVTNFFWMFVEGCYLHTAIVM 241

Qy        218 TYSTDKLRKWVFLFIGWCIPSPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILV 277
              ||||::|||||:|:|||||:| |||: ||| ||:|||:||| |||||  :|||||| :|||
Db        242 TYSTERLRKWLFIFIGWCVPCPIIIAWAIGKLYYENKQCWFGKEPGDLVDYIYQGPIILV 301

Qy        278 LLINFVFLFNIVRILMTKLRASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDV 337
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||:
Db        302 LLINFVFLFNIVRILMTKLRASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDL 361

Qy        338 SQIVFIYFNSFLQSFQGFFVSVFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPT 397
              |||||||||||||||||||||||| ||||||| |||||||||||||| |||||||||
Db        362 SQIVFIYFNSFLQSFQGFFVSVFYCFFNGEVRSALRKRWHRWQDHHSLRVPVARAMSIPT 421

Qy        398 SPTRISFHSIKQTAAV 413
              ||||||||||||||||
Db        422 SPTRISFHSIKQTAAV 437


RESULT 10
CRF2_MOUSE
ID   CRF2_MOUSE     STANDARD;      PRT;   431 AA.
AC   Q60748; Q60783; Q60808;
DT   01-NOV-1997 (Rel. 35, Created)
DT   01-NOV-1997 (Rel. 35, Last sequence update)
DT   25-OCT-2004 (Rel. 45, Last annotation update)
DE   Corticotropin releasing factor receptor 2 precursor (CRF-R 2) (CRF2)
DE   (Corticotropin-releasing hormone receptor 2) (CRH-R 2) (CRF-RB) (CRH-
DE   R2).
GN   Name=Crhr2; Synonyms=Crf2r;
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Heart;
RX   MEDLINE=95224061; PubMed=7708757;
RA   Perrin M., Donaldson C., Chen R., Blount A., Berggren T.,
RA   Bilezikjian L., Sawchenko P., Vale W.;
RT   "Identification of a second corticotropin-releasing factor receptor
RT   gene and characterization of a cDNA expressed in heart.";
RL   Proc. Natl. Acad. Sci. U.S.A. 92:2969-2973(1995).
RN   [2]
RP   SEQUENCE FROM N.A.
RC   STRAIN=BALB/c; TISSUE=Heart;
RX   MEDLINE=95166778; PubMed=7755719;
RA   Kishimoto T., Pearse R.V. II, Lin C.R., Rosenfeld M.G.;
RT   "A sauvagine/corticotropin-releasing factor receptor expressed in
RT   heart and skeletal muscle.";
RL   Proc. Natl. Acad. Sci. U.S.A. 92:1108-1112(1995).
RN   [3]
RP   SEQUENCE FROM N.A.
RC   STRAIN=BALB/c; TISSUE=Heart;
RX   MEDLINE=96015396; PubMed=7565810; DOI=10.1210/me.9.5.637;
RA   Stenzel P., Kesterson R., Yeung W., Cone R.D., Rittenberg M.B.,
RA   Stenzel-Poore M.P.;
RT   "Identification of a novel murine receptor for corticotropin-releasing
RT   hormone expressed in the heart.";
RL   Mol. Endocrinol. 9:637-645(1995).
CC   -!- FUNCTION: This is a receptor for corticotropin releasing factor.
CC       Shows high-affinity CRF binding. Also binds to urocortin I, II and
CC       III. The activity of this receptor is mediated by G proteins which
CC       activate adenylyl cyclase.
CC   -!- SUBCELLULAR LOCATION: Integral membrane protein.
CC   -!- TISSUE SPECIFICITY: Highly expressed in the heart. Also expressed
CC       in lungs, skeletal muscle, gastrointestinal tract, epididymis, and
CC       brain.
CC   -!- SIMILARITY: Belongs to the G-protein coupled receptor 2 family.
CC   ---------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC   the European Bioinformatics Institute. There are no restrictions on its
CC   use by non-profit institutions as long as its content is in no way
CC   modified and this statement is not removed. Usage by and for commercial
CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; U17858; AAA68026.1; -.
DR   EMBL; U21729; AAC52174.1; -.
DR   EMBL; U19939; AAC52243.1; -.
DR   PIR; A56726; A56726.
DR   PIR; I49149; I49149.
DR   PIR; I49279; I49279.
DR   MGD; MGI:894312; Crhr2.
DR   GO; GO:0015056; F:corticotrophin-releasing factor receptor ac. . .; IDA.
DR   GO; GO:0016525; P:negative regulation of angiogenesis; IMP.
DR   InterPro; IPR000832; GPCR_secretin.
DR   InterPro; IPR001879; hormn_receptor.
DR   Pfam; PF00002; 7tm_2; 1.
DR   Pfam; PF02793; HRM; 1.
DR   PRINTS; PR00249; GPCRSECRETIN.
DR   SMART; SM00008; HormR; 1.
DR   PROSITE; PS00649; G_PROTEIN_RECEP_F2_1; 1.
DR   PROSITE; PS00650; G_PROTEIN_RECEP_F2_2; 1.
DR   PROSITE; PS50227; G_PROTEIN_RECEP_F2_3; 1.
DR   PROSITE; PS50261; G_PROTEIN_RECEP_F2_4; 1.
KW   G-protein coupled receptor; Glycoprotein; Signal; Transmembrane.
FT   SIGNAL       1     24       Potential.
FT   CHAIN       25    431       Corticotropin releasing factor receptor
FT                                2.
FT   DOMAIN      25    138       Extracellular (Potential).
FT   TRANSMEM   139    159       1 (Potential).
```

```
FT   DOMAIN      160    168       Cytoplasmic (Potential).
FT   TRANSMEM    169    188       2 (Potential).
FT   DOMAIN      189    205       Extracellular (Potential).
FT   TRANSMEM    206    229       3 (Potential).
FT   DOMAIN      230    243       Cytoplasmic (Potential).
FT   TRANSMEM    244    265       4 (Potential).
FT   DOMAIN      266    284       Extracellular (Potential).
FT   TRANSMEM    285    307       5 (Potential).
FT   DOMAIN      308    330       Cytoplasmic (Potential).
FT   TRANSMEM    331    350       6 (Potential).
FT   DOMAIN      351    365       Extracellular (Potential).
FT   TRANSMEM    366    385       7 (Potential).
FT   DOMAIN      386    431       Cytoplasmic (Potential).
FT   CARBOHYD     52     52       N-linked (GlcNAc. . .) (Potential).
FT   CARBOHYD     61     61       N-linked (GlcNAc. . .) (Potential).
FT   CARBOHYD     94     94       N-linked (GlcNAc. . .) (Potential).
FT   CARBOHYD    106    106       N-linked (GlcNAc. . .) (Potential).
FT   CARBOHYD    114    114       N-linked (GlcNAc. . .) (Potential).
FT   CONFLICT      3      5       TPG -> QQI (in Ref. 2).
FT   CONFLICT    126    126       Missing (in Ref. 3).
FT   CONFLICT    392    393       KR -> NG (in Ref. 3).
FT   CONFLICT    396    397       RW -> SG (in Ref. 2).
FT   CONFLICT    408    408       A -> R (in Ref. 2).
SQ   SEQUENCE   431 AA;  49923 MW;  A6D9EDE575DB8061 CRC64;

  Query Match             79.4%;  Score 1770.5;  DB 1;  Length 431;
  Best Local Similarity   84.7%;  Pred. No. 1.3e-123;
  Matches  321;  Conservative   26;  Mismatches   29;  Indels    3;  Gaps    2;

Qy         38 FEGP--YCSATIDQIGTCWPRSLAGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASW 95
              | ||  ||: |:||||||||:|  | |||||||: ||||:|||||| |||| |||||||
Db         53 FSGPYTYCNTTLDQIGTCWPQSAPGALVERPCPEYFNGIKYNTTRNAYRECLENGTWASR 112

Qy         96 MNYSQCVPILDNK-RKYALHYKIALIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIH 154
              :||| | ||||:| ||| |||:||||:||||||:|::||| |||||| |||||||||:||
Db        113 VNYSHCEPILDDKQRKYDLHYRIALIVNYLGHCVSVVALVAAFLLFLVLRSIRCLRNVIH 172

Qy        155 WNLITTFILRNIMWFLLQMIDHNIHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTA 214
              |||||||||||| ||||:||| :|| |||||||||||:||||||||||||||||||||||
Db        173 WNLITTFILRNIAWFLLQLIDHEVHEGNEVWCRCITTIFNYFVVTNFFWMFVEGCYLHTA 232

Qy        215 IVMTYSTDKLRKWVFLFIGWCIPSPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRV 274
              |||||||: |||||:|||||||||| |||: ||: ||:|||||||| ||| |  :|||||| |
Db        233 IVMTYSTEHLRKWLFLFIGWCIPCPIIIAWAVGKLYYENEQCWFGKEAGDLVDYIYQGPV 292

Qy        275 ILVLLINFVFLFNIVRILMTKLRASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGE 334
              :||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        293 MLVLLINFVFLFNIVRILMTKLRASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGE 352

Qy        335 DDVSQIVFIYFNSFLQSFQGFFVSVFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMS 394
              ||:|||||||||||||||||||||||| |||||:| |||||||||||:||| ||||||
Db        353 DDLSQIVFIYFNSFLQSFQGFFVSVFYCFFNGEVRAALRKRWHRWQDHHALRVPVARAMS 412

Qy        395 IPTSPTRISFHSIKQTAAV 413
              ||||||||||||||||||
Db        413 IPTSPTRISFHSIKQTAAV 431


RESULT 11
Q98UC0
ID   Q98UC0      PRELIMINARY;      PRT;   428 AA.
AC   Q98UC0;
DT   01-JUN-2001 (TrEMBLrel. 17, Created)
DT   01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Corticotropin releasing factor receptor 3.
OS   Ameiurus nebulosus.
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Siluriformes;
OC   Ictaluridae; Ameiurus.
OX   NCBI_TaxID=27778;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=21066341; PubMed=11145609; DOI=10.1210/en.142.1.446;
RA   Arai M., Assil I.Q., Abou-Samra A.B.;
RT   "Characterization of three corticotropin-releasing factor receptors in
RT   catfish: a novel third receptor is predominantly expressed in
RT   pituitary and urophysis.";
RL   Endocrinology 142:446-454(2001).
DR   EMBL; AF229361; AAK01070.1; -.
DR   GO; GO:0016020; C:membrane; IEA.
DR   GO; GO:0004930; F:G-protein coupled receptor activity; IEA.
DR   GO; GO:0004872; F:receptor activity; IEA.
DR   InterPro; IPR003051; CRF_receptor.
DR   InterPro; IPR000832; GPCR_secretin.
DR   InterPro; IPR001879; hormn_receptor.
DR   Pfam; PF00002; 7tm_2; 1.
DR   Pfam; PF02793; HRM; 1.
DR   PRINTS; PR01279; CRFRECEPTOR.
DR   PRINTS; PR00249; GPCRSECRETIN.
DR   SMART; SM00008; HormR; 1.
DR   PROSITE; PS00649; G_PROTEIN_RECEP_F2_1; UNKNOWN_1.
DR   PROSITE; PS00650; G_PROTEIN_RECEP_F2_2; 1.
DR   PROSITE; PS50227; G_PROTEIN_RECEP_F2_3; 1.
DR   PROSITE; PS50261; G_PROTEIN_RECEP_F2_4; 1.
KW   Receptor.
SQ   SEQUENCE   428 AA;  49406 MW;  63F9C07AFFEF5B27 CRC64;

  Query Match             71.0%;  Score 1582.5;  DB 2;  Length 428;
  Best Local Similarity   73.1%;  Pred. No. 1.3e-109;
  Matches  285;  Conservative   48;  Mismatches   52;  Indels    5;  Gaps    2;

Qy         25 DSFLHSESSSFFGFEGPYCSATIDQIGTCWPRSLAGELVERPCPDSFNGIRYNTTRNVYR 84
              |:  ||:::      | :||  || ||||||||:|||:| ||||:   |:|||||  ::|
Db         43 DAANHSDTNN----SGVFCSTVIDGIGTCWPRSVAGEMVSRPCPEFLYGVRYNTTNKIFR 98

Qy         85 ECFENGTWASWMNYSQCVPILDNKRKYALHYKIALIINYLGHCISILALVIAFLLFLCLR 144
              :|  |||||   |||||  ||: :||  |||:||:||||||||:|:  |:|||::|| ||
Db         99 KCLANGTWAPKSNYSQCKAILNVQRKSKLHYRIAVIINYLGHCLSLFTLLIAFIIFLRLR 158

Qy        145 SIRCLRNIIHWNLITTFILRNIMWFLLQM-IDHNIHESNEVWCRCITTIYNYFVVTNFFW 203
              |||||||||||| : |||||  ||::|: :: ::||||  ||| :|| |||| : ||||
Db        159 SIRCLRNIIHWNLTSAFILRNATWFIVQLTMNPDVHESNVPWCRLVTTAYNYFHMANFFW 218

Qy        204 MFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIPSPIIVTWAICKLFYENEQCWIGKEPG 263
              || |||||||||:|||||||:||:|: ||||||||||| ||| ||:|:||:|| ||  |
Db        219 MFGEGCYLHTAIVLTYSTDKLKKWMFICIGWCIPSPIIVAWAIGKLYYDNEKCWFGKRAG 278

Qy        264 KYIDYIYQGRVILVLLINFVFLFNIVRILMTKLRASTTSETIQYRKAVKATLVLLPLLGI 323
              | |||||| :||||:|||||||||||||||||||||||||||||||||||||||||||||
Db        279 IYTDYIYQGPMILVLMINFVFLFNIVRILMTKLRASTTSETIQYRKAVKATLVLLPLLGI 338

Qy        324 TYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFVSVFYCFLNGEVRSAARKRWHRWQDHH 383
              |||||||||::|||||||||||||||||||||||||||| ||||| || ||||||||
Db        339 TYMLFFVNPGEDEISQIVFIYFNSFLQSFQGFFVSVFYCFLNSEVRSAVRKHWHRWQDHH 398

Qy        384 SLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |:| ||||||||||||:|:|||||||: :|
Db        399 SIRARVARAMSIPTSPSRLSFHSIKQSTSV 428


RESULT 12
CRF1_CHICK
ID   CRF1_CHICK      STANDARD;      PRT;   420 AA.
AC   Q90812;
DT   01-NOV-1997 (Rel. 35, Created)
DT   01-NOV-1997 (Rel. 35, Last sequence update)
DT   25-OCT-2004 (Rel. 45, Last annotation update)
DE   Corticotropin releasing factor receptor 1 precursor (CRF-R) (CRF1)
DE   (Corticotropin-releasing hormone receptor 1) (CRH-R 1).
OS   Gallus gallus (Chicken).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
OC   Gallus.
OX   NCBI_TaxID=9031;
RN   [1]
```

```
RP   SEQUENCE FROM N.A.
RX   MEDLINE=96107136; PubMed=8536612; DOI=10.1210/en.137.1.192;
RA   Yu J., Xie L.Y., Abou-Samra A.-B.;
RT   "Molecular cloning of a type A chicken corticotropin-releasing factor
RT   receptor with high affinity for urotensin I.";
RL   Endocrinology 137:192-197(1996).
CC   -!- FUNCTION: This is a receptor for corticotropin releasing factor.
CC       Shows high-affinity binding for urotensin I. The activity of this
CC       receptor is mediated by G proteins which activate adenylyl
CC       cyclase.
CC   -!- SUBCELLULAR LOCATION: Integral membrane protein.
CC   -!- SIMILARITY: Belongs to the G-protein coupled receptor 2 family.
CC   ---------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC   the European Bioinformatics Institute. There are no restrictions on its
CC   use by non-profit institutions as long as its content is in no way
CC   modified and this statement is not removed. Usage by and for commercial
CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; L41563; AAA96656.1; -.
DR   InterPro; IPR000832; GPCR_secretin.
DR   InterPro; IPR001879; hormn_receptor.
DR   Pfam; PF00002; 7tm_2; 1.
DR   Pfam; PF02793; HRM; 1.
DR   PRINTS; PR00249; GPCRSECRETIN.
DR   SMART; SM00008; HormR; 1.
DR   PROSITE; PS00649; G_PROTEIN_RECEP_F2_1; 1.
DR   PROSITE; PS00650; G_PROTEIN_RECEP_F2_2; 1.
DR   PROSITE; PS50227; G_PROTEIN_RECEP_F2_3; 1.
DR   PROSITE; PS50261; G_PROTEIN_RECEP_F2_4; 1.
KW   G-protein coupled receptor; Glycoprotein; Signal; Transmembrane.
FT   SIGNAL        1     28       Potential.
FT   CHAIN        29    420       Corticotropin releasing factor receptor
FT                                1.
FT   DOMAIN       29    126       Extracellular (Potential).
FT   TRANSMEM    127    147       1 (Potential).
FT   DOMAIN      148    156       Cytoplasmic (Potential).
FT   TRANSMEM    157    176       2 (Potential).
FT   DOMAIN      177    194       Extracellular (Potential).
FT   TRANSMEM    195    218       3 (Potential).
FT   DOMAIN      219    232       Cytoplasmic (Potential).
FT   TRANSMEM    233    254       4 (Potential).
FT   DOMAIN      255    273       Extracellular (Potential).
FT   TRANSMEM    274    296       5 (Potential).
FT   DOMAIN      297    319       Cytoplasmic (Potential).
FT   TRANSMEM    320    339       6 (Potential).
FT   DOMAIN      340    354       Extracellular (Potential).
FT   TRANSMEM    355    374       7 (Potential).
FT   DOMAIN      375    420       Cytoplasmic (Potential).
FT   DISULFID     35     59       By similarity.
FT   DISULFID     49     92       By similarity.
FT   DISULFID     73    107       By similarity.
FT   CARBOHYD     43     43       N-linked (GlcNAc. . .) (Potential).
FT   CARBOHYD     50     50       N-linked (GlcNAc. . .) (Potential).
FT   CARBOHYD     83     83       N-linked (GlcNAc. . .) (Potential).
FT   CARBOHYD     95     95       N-linked (GlcNAc. . .) (Potential).
FT   CARBOHYD    103    103       N-linked (GlcNAc. . .) (Potential).
SQ   SEQUENCE   420 AA;  48600 MW;  8C5C992925F62316 CRC64;

  Query Match             71.0%;  Score 1582;  DB 1;  Length 420;
  Best Local Similarity   72.3%;  Pred. No. 1.3e-109;
  Matches  287;  Conservative   49;  Mismatches   55;  Indels    6;  Gaps    2;

Qy         18 SLLDAFQDSFLHSESSSFFGFEGPYCSATIDQIGTCWPRSLAGELVERPCPDSFNGIRYN 77
              |: : : :| | : : :     || |:|::| |||||||| |:|| ||||: | |:|||
Db         29 SIQEQYCESLLPTTNHT-----GPQCNASVDLIGTCWPRSAVGQLVARPCPEYFYGVRYN 83

Qy         78 TTRNVYRECFENGTWASWMNYSQCVPILDNKRKYALHYKIALIINYLGHCISILALVIAF 137
              || | ||||  ||:||: :|||||  ||  :::  ||| ||:||||||||:|:  |::||
Db         84 TTNNGYRECLANGSWAARVNYSQCQEILSEEKRSKLHYHIAVIINYLGHCVSLGTLLVAF 143

Qy        138 LLPLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQM-IDHNIHESNEVWCRCITTIYNYF 196
              :||: |||||||||||||||| ||||| ||::|: :: :|||| |||| :|  ||||
Db        144 VLFMRLRSIRCLRNIIHWNLITAFILRNATWFVVQLTMNPEVHESNVVWCRLVTAAYNYF 203

Qy        197 VVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIPSPIIVTWAICKLFYENEQC 256
              |||||||| |||||||||:|||||||||:|: |||||| |||| ||| ||:|:||:|
Db        204 HVTNFFWMFGEGCYLHTAIVLTYSTDKLRKWMFICIGWCIPFPIIVAWAIGKLYYDNEKC 263

Qy        257 WIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLRASTTSETIQYRKAVKATLV 316
              | ||  | | |||||| :|||||||:|||||||||||||||||||||||||||||||||
Db        264 WFGKRAGVYTDYIYQGPMILVLLINFIFLFNIVRILMTKLRASTTSETIQYRKAVKATLV 323

Qy        317 LLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFVSVFYCFLNGEVRSAARKRW 376
              || |||||||||||||||::|:|||||||||:|||||||||||||| ||||| ||||
Db        324 LLSLLGITYMLFFVNPGEDEISRIVFIYFNSFLESFQGFFVSVFYCFLNSEVRSAVRKRW 383

Qy        377 HRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              ||||| ||:| |||||||||||||:|||||||::||
Db        384 HRWQDKHSIRARVARAMSIPTSPTRVSFHSIKQSSAV 420


RESULT 13
Q98UC2
ID   Q98UC2      PRELIMINARY;      PRT;   445 AA.
AC   Q98UC2;
DT   01-JUN-2001 (TrEMBLrel. 17, Created)
DT   01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Corticotropin releasing factor receptor 1.
OS   Ameiurus nebulosus.
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Siluriformes;
OC   Ictaluridae; Ameiurus.
OX   NCBI_TaxID=27778;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=21066341; PubMed=11145609; DOI=10.1210/en.142.1.446;
RA   Arai M., Assil I.Q., Abou-Samra A.B.;
RT   "Characterization of three corticotropin-releasing factor receptors in
RT   catfish: a novel third receptor is predominantly expressed in
RT   pituitary and urophysis.";
RL   Endocrinology 142:446-454(2001).
DR   EMBL; AF229359; AAK01068.1; -.
DR   GO; GO:0016020; C:membrane; IEA.
DR   GO; GO:0004930; F:G-protein coupled receptor activity; IEA.
DR   GO; GO:0004872; F:receptor activity; IEA.
DR   InterPro; IPR003052; CRF1_receptor.
DR   InterPro; IPR003051; CRF_receptor.
DR   InterPro; IPR000832; GPCR_secretin.
DR   InterPro; IPR001879; hormn_receptor.
DR   Pfam; PF00002; 7tm_2; 1.
DR   Pfam; PF02793; HRM; 1.
DR   PRINTS; PR01279; CRFRECEPTOR.
DR   PRINTS; PR01280; CRFRECEPTOR1.
DR   PRINTS; PR00249; GPCRSECRETIN.
DR   SMART; SM00008; HormR; 1.
DR   PROSITE; PS00649; G_PROTEIN_RECEP_F2_1; UNKNOWN_1.
DR   PROSITE; PS00650; G_PROTEIN_RECEP_F2_2; 1.
DR   PROSITE; PS50227; G_PROTEIN_RECEP_F2_3; 1.
DR   PROSITE; PS50261; G_PROTEIN_RECEP_F2_4; 1.
KW   Receptor.
SQ   SEQUENCE   445 AA;  51062 MW;  F17DA70BE22BB755 CRC64;

  Query Match             70.8%;  Score 1578.5;  DB 2;  Length 445;
  Best Local Similarity   76.5%;  Pred. No. 2.6e-109;
  Matches  287;  Conservative   39;  Mismatches   48;  Indels    1;  Gaps    1;

Qy         40 GPYCSATIDQIGTCWPRSLAGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYS 99
              | :|: :|| |||||||| |||:| ||||::| |:||||| ||||||  |||||   |||
Db         71 GLFCNISIDGIGTCWPRSNAGEIVSRPCPETFLGVRYNTTNNVYRECLANGTWAKKGNYS 130

Qy        100 QCVPILDNKRKYALHYKIALIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLIT 159
              ||  ||: ::|  ||| ||:||||||||||: ||::||:||: || ||||||||||||||
```

```
Db        131 QCQEILNEEKKSKLHYHIAVIINYLGHCISLGALLVAFILFMRLRMIRCLRNIIHWNLIM 190

Qy        160 TFILRNIMWFLLQM-IDHNIHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMT 218
              |||||  ||::|: ::  :|||| :||| :|  |||| |||||||| ||||||||||:|
Db        191 AFILRNATWFVVQLTMNPEVHESNVIWCRLVTAAYNYFHVTNFFWMFGEGCYLHTAIVLT 250

Qy        219 YSTDKLRKWVFLFIGWCIPSPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVL 278
              |||||||||:|: |||||| |||| ||| ||:|:||:|| ||  | | |||||| :||||
Db        251 YSTDKLRKWLFICIGWCIPFPIIVAWAIGKLYYDNEKCWFGKRAGVYTDYIYQGPMILVL 310

Qy        279 LINFVFLFNIVRILMTKLRASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVS 338
              ||||:||||||||||||||||||||||||||||||||||||||||||||||||||||::|
Db        311 LINFIFLFNIVRILMTKLRASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDEIS 370

Qy        339 QIVFIYFNSFLQSFQGFFVSVFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTS 398
              |||||||||||:|||||||||||||||| ||||| |||||| || ||:| ||||||||||
Db        371 QIVFIYFNSFLESFQGFFVSVFYCFLNSEVRSAVRKRWHRRQDKHSIRARVARAMSIPTS 430

Qy        399 PTRISFHSIKQTAAV 413
              |||:|||||||::||
Db        431 PTRVSFHSIKQSSAV 445


RESULT 14
Q76LL8
ID   Q76LL8      PRELIMINARY;      PRT;   415 AA.
AC   Q76LL8;
DT   05-JUL-2004 (TrEMBLrel. 27, Created)
DT   05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
DT   05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
DE   Corticotropin releasing factor receptor type 1.
GN   Name=CRF1;
OS   Macaca mulatta (Rhesus macaque).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Cercopithecidae;
OC   Cercopithecinae; Macaca.
OX   NCBI_TaxID=9544;
RN   [1]
RP   SEQUENCE FROM N.A.
RA   Oshida Y., Ikeda Y., Chaki S., Okuyama S.;
RL   Submitted (JAN-2002) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AB078141; BAD02831.1; -.
DR   GO; GO:0016020; C:membrane; IEA.
DR   GO; GO:0004930; F:G-protein coupled receptor activity; IEA.
DR   GO; GO:0004872; F:receptor activity; IEA.
DR   InterPro; IPR003052; CRF1_receptor.
DR   InterPro; IPR003051; CRF_receptor.
DR   InterPro; IPR000832; GPCR_secretin.
DR   InterPro; IPR001879; hormn_receptor.
DR   Pfam; PF00002; 7tm_2; 1.
DR   Pfam; PF02793; HRM; 1.
DR   PRINTS; PR01279; CRFRECEPTOR.
DR   PRINTS; PR01280; CRFRECEPTOR1.
DR   PRINTS; PR00249; GPCRSECRETIN.
DR   SMART; SM00008; HormR; 1.
DR   PROSITE; PS00649; G_PROTEIN_RECEP_F2_1; 1.
DR   PROSITE; PS00650; G_PROTEIN_RECEP_F2_2; 1.
DR   PROSITE; PS50227; G_PROTEIN_RECEP_F2_3; 1.
DR   PROSITE; PS50261; G_PROTEIN_RECEP_F2_4; 1.
KW   Receptor.
SQ   SEQUENCE   415 AA;  47784 MW;  84C530DEC6DA97AD CRC64;

  Query Match             70.3%;  Score 1566;  DB 2;  Length 415;
  Best Local Similarity   72.8%;  Pred. No. 2.1e-108;
  Matches  287;  Conservative   46;  Mismatches   57;  Indels    4;  Gaps    3;

Qy         22 AFQDSFLHSESSSF-FGFEGPYCSATIDQIGTCWPRSLAGELVERPCPDSFNGIRYNTTR 80
              : ||   | || |       |  |:|::| |||||||| ||:|| ||||  | |:|||||
Db         24 SLQDQ--HCESLSLASNISGLQCNASVDLIGTCWPRSPAGQLVVRPCPAFFYGVRYNTTN 81

Qy         81 NVYRECFENGTWASWMNYSQCVPILDNKRKYALHYKIALIINYLGHCISILALVIAFLLF 140
              | ||||  ||:||: :|||:|  ||: ::|  :|| :|:||||||||||::||::||:||
Db         82 NGYRECLANGSWAARVNYSECQEILNEEKKSKVHYHVAVIINYLGHCISLVALLVAFVLF 141

Qy        141 LCLRSIRCLRNIIHWNLITTFILRNIMWFLLQM-IDHNIHESNEVWCRCITTIYNYFVVT 199
              | |||||||||||||||: |||||  ||::|: :   :|:||  ||| :|  |||| ||
Db        142 LRLRSIRCLRNIIHWNLISAFILRNATWFVVQLTMSPEVHQSNVGWCRLVTAAYNYFHVT 201

Qy        200 NFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIPSPIIVTWAICKLFYENEQCWIG 259
              |||||| |||||||||||:|||||:||||:|: ||| :| |||| ||| ||:|:||:|| |
Db        202 NFFWMFGEGCYLHTAIVLTYSTDRLRKWMFICIGWGVPFPIIVAWAIGKLYYDNEKCWFG 261

Qy        260 KEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLRASTTSETIQYRKAVKATLVLLP 319
              | || | |||||| :|||||||:|||||||||||||||||||||||||||||||||||||
Db        262 KRPGVYTDYIYQGPMILVLLINFIFLFNIVRILMTKLRASTTSETIQYRKAVKATLVLLP 321

Qy        320 LLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFVSVFYCFLNGEVRSAARKRWHRW 379
              |||||||||||||||:||::|||||||||:|||||||||||||| ||||| |||||||
Db        322 LLGITYMLFFVNPGEDEVSRVVFIYFNSFLESFQGFFVSVFYCFLNSEVRSAIRKRWHRW 381

Qy        380 QDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              || ||:| ||||||||||||||:|||||||: ||
Db        382 QDKHSIRARVARAMSIPTSPTRVSFHSIKQSTAV 415


RESULT 15
CRF1_XENLA
ID   CRF1_XENLA     STANDARD;      PRT;   415 AA.
AC   O42602;
DT   15-JUL-1998 (Rel. 36, Created)
DT   15-JUL-1998 (Rel. 36, Last sequence update)
DT   25-OCT-2004 (Rel. 45, Last annotation update)
DE   Corticotropin releasing factor receptor 1 precursor (CRF-R) (CRF1)
DE   (Corticotropin-releasing hormone receptor 1) (CRH-R 1).
GN   Name=CRF1;
OS   Xenopus laevis (African clawed frog).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
OC   Xenopodinae; Xenopus.
OX   NCBI_TaxID=8355;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Brain;
RX   MEDLINE=97465573; PubMed=9326293;
RA   Dautzenberg F.M., Dietrich K., Palchaudhuri M.R., Spiess J.;
RT   "Identification of two corticotropin-releasing factor receptors from
RT   Xenopus laevis with high ligand selectivity: unusual pharmacology of
RT   the type 1 receptor.";
RL   J. Neurochem. 69:1640-1649(1997).
CC   -!- FUNCTION: This is a receptor for corticotropin releasing factor.
CC       Shows high-affinity binding for urotensin I. The activity of this
CC       receptor is mediated by G proteins which activate adenylyl cyclase
CC       (By similarity).
CC   -!- SUBCELLULAR LOCATION: Integral membrane protein.
CC   -!- SIMILARITY: Belongs to the G-protein coupled receptor 2 family.
CC   ---------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC   the European Bioinformatics Institute. There are no restrictions on its
CC   use by non-profit institutions as long as its content is in no way
CC   modified and this statement is not removed. Usage by and for commercial
CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; Y14036; CAA74363.1; -.
DR   InterPro; IPR000832; GPCR_secretin.
DR   InterPro; IPR001879; hormn_receptor.
DR   Pfam; PF00002; 7tm_2; 1.
DR   Pfam; PF02793; HRM; 1.
DR   PRINTS; PR00249; GPCRSECRETIN.
DR   SMART; SM00008; HormR; 1.
DR   PROSITE; PS00649; G_PROTEIN_RECEP_F2_1; 1.
DR   PROSITE; PS00650; G_PROTEIN_RECEP_F2_2; 1.
DR   PROSITE; PS50227; G_PROTEIN_RECEP_F2_3; 1.
DR   PROSITE; PS50261; G_PROTEIN_RECEP_F2_4; 1.
KW   G-protein coupled receptor; Glycoprotein; Signal; Transmembrane.
```

```
FT   SIGNAL        1     24       Potential.
FT   CHAIN        25    415       Corticotropin releasing factor receptor
FT                                 1.
FT   DOMAIN       25    121       Extracellular (Potential).
FT   TRANSMEM    122    142       1 (Potential).
FT   DOMAIN      143    151       Cytoplasmic (Potential).
FT   TRANSMEM    152    171       2 (Potential).
FT   DOMAIN      172    189       Extracellular (Potential).
FT   TRANSMEM    190    213       3 (Potential).
FT   DOMAIN      214    227       Cytoplasmic (Potential).
FT   TRANSMEM    228    249       4 (Potential).
FT   DOMAIN      250    268       Extracellular (Potential).
FT   TRANSMEM    269    291       5 (Potential).
FT   DOMAIN      292    314       Cytoplasmic (Potential).
FT   TRANSMEM    315    334       6 (Potential).
FT   DOMAIN      335    349       Extracellular (Potential).
FT   TRANSMEM    350    369       7 (Potential).
FT   DOMAIN      370    415       Cytoplasmic (Potential).
FT   DISULFID     30     54       By similarity.
FT   DISULFID     44     87       By similarity.
FT   DISULFID     68    102       By similarity.
FT   CARBOHYD     38     38       N-linked (GlcNAc. . .) (Potential).
FT   CARBOHYD     45     45       N-linked (GlcNAc. . .) (Potential).
FT   CARBOHYD     78     78       N-linked (GlcNAc. . .) (Potential).
FT   CARBOHYD     90     90       N-linked (GlcNAc. . .) (Potential).
SQ   SEQUENCE   415 AA;  47786 MW;  74ED24C17907B74D CRC64;

  Query Match             70.2%;  Score 1564.5;  DB 1;  Length 415;
  Best Local Similarity   72.2%;  Pred. No. 2.7e-108;
  Matches  285;  Conservative   49;  Mismatches   58;  Indels    3;  Gaps    2;

Qy         20 LDAFQDSFLHSESSSFFGFEGPYCSATIDQIGTCWPRSLAGELVERPCPDSFNGIRYNTT 79
              | : ||     : :|   | |  |:|:|| |||||| : ||::| ||||: |:|::|||| 
Db         23 LTSLQDQCETLQHNS--NFTGLACNASIDMIGTCWPSTAAGQMVARPCPEYFHGVQYNTT 80

Qy         80 RNVYRECFENGTWASWMNYSQCVPILDNKRKYALHYKIALIINYLGHCISILALVIAFLL 139
               ||||||  ||:||   :|:||  ||  ::|  :|| ||::||:||| ||: ||::||:| 
Db         81 GNVYRECHLNGSWAGRGDYAQCQEILKQEKKTKVHYHIAIVINFLGHSISLCALLVAFIL 140

Qy        140 FLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQM-IDHNIHESNEVWCRCITTIYNYFVV 198
              || |||||||||||||||| |||||: ||::|: : |  |:|| |||| :|  :||| | 
Db        141 FLRLRSIRCLRNIIHWNLITAFILRNVTWFVMQLTLSHEAHDSNVVWCRLVTIAHNYFYV 200

Qy        199 TNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIPSPIIVTWAICKLFYENEQCWI 258
              ||||||| |||||||||:||||||||||:|: |||||| |||| ||| ||:|:||:|| 
Db        201 TNFFWMFGEGCYLHTAIVLTYSTDKLRKWMFICIGWCIPFPIIVAWAIGKLYYDNEKCWF 260

Qy        259 GKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLRASTTSETIQYRKAVKATLVLL 318
              ||: | | |:|||| |||||||||:|||||||||||||||||||||||||||||||||| 
Db        261 GKKAGVYTDFIYQGPVILVLLINFIFLFNIVRILMTKLRASTTSETIQYRKAVKATLVLL 320

Qy        319 PLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFVSVFYCFLNGEVRSAARKRWHR 378
              |||||||||||| ||||::|:|||||||||||||||||||||||| ||||| |||||| 
Db        321 PLLGITYMLFFVTPGEDEISRIVFIYFNSFLQSFQGFFVSVFYCFLNSEVRSAVRKRWHR 380

Qy        379 WQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              ||| ||:| ||||||||||||||||||||::|: 
Db        381 WQDKHSIRARVARAMSIPTSPTRISFHSIKQSSAI 415


Search completed: August 20, 2005, 00:28:25
Job time : 171 secs
```

GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: August 20, 2005, 00:18:48 ; Search time 40 Seconds
(without alignments)
993.438 Million cell updates/sec

Title: US-10-649-852-32
Perfect score: 2229
Sequence: 1 MDSTIFEIIIDEFDANCSLL.....SIPTSPTRISFHSIKQTAAV 413

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : PIR_79:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	1793	80.4	411	2	A55610	corticotropin-rele
2	1770.5	79.4	431	2	I49149	CRF receptor - mou
3	1769	79.4	430	2	A56726	corticoliberin rec
4	1746.5	78.4	431	2	I49279	sauvagine/corticot
5	1556.5	69.8	415	2	S39535	corticotropin-rele
6	1551.5	69.6	415	2	I58144	corticotropin-rele
7	1541.5	69.2	444	2	A48260	corticoliberin rec
8	1408.5	63.2	375	2	I38879	corticotropin rele
9	612	27.5	585	2	A39286	parathyroid hormon
10	595.5	26.7	479	2	S33746	calcitonin recepto
11	593	26.6	515	2	I49154	calcitonin recepto
12	590	26.5	515	2	I60800	calcitonin recepto
13	589.5	26.4	478	2	A37430	calcitonin recepto
14	587.5	26.4	593	2	A49191	parathyroid hormon
15	587	26.3	474	2	I37217	calcitonin recepto
16	569	25.5	490	2	S34486	calcitonin recepto
17	567	25.4	591	2	I54195	parathyroid hormon
18	565.5	25.4	591	2	S44203	parathyroid hormon
19	564	25.3	482	2	A39285	calcitonin recepto
20	553.5	24.8	449	2	S16319	secretin receptor
21	553.5	24.8	464	2	I60194	calcitonin-like re
22	553	24.8	440	2	JC2532	secretin receptor
23	548.5	24.6	461	2	JC2477	calcitonin recepto
24	546	24.5	498	2	I47130	calcitonin recepto
25	545	24.5	589	2	I59297	parathyroid hormon
26	535.5	24.0	550	2	A57519	parathyroid hormon
27	516.5	23.2	459	2	JH0594	vasoactive intesti
28	506	22.7	460	2	JC2194	vasoactive intesti
29	506	22.7	495	2	JC2195	vasoactive intesti
30	492	22.1	525	2	JN0902	pituitary adenylat
31	491.5	22.1	467	2	JN0616	pituitary adenylat
32	490	22.0	485	2	JC4363	glucagon receptor
33	485	21.8	485	2	JQ1957	glucagon receptor
34	479	21.5	423	2	A45363	somatoliberin rece
35	479	21.5	477	2	JC2041	glucagon receptor
36	478	21.4	455	2	I53273	gastric inhibitory
37	476.5	21.4	462	2	JC2462	gastric inhibitory
38	476	21.4	513	2	S47631	pituitary adenylat
39	475.5	21.3	463	2	A46172	glucagon-like pept
40	473.5	21.2	495	2	S36114	pituitary adenylat
41	472.5	21.2	438	2	G02822	vasoactive intesti
42	472	21.2	463	2	I84494	glucagon-like pept
43	471.5	21.2	495	2	S39061	pituitary adenylyl
44	470	21.1	466	2	G02234	gastric inhibitory
45	470	21.1	466	2	S66676	glucose-dependent

ALIGNMENTS

RESULT 1
A55610
corticotropin-releasing factor receptor subtype 2 - rat
C;Species: Rattus norvegicus (Norway rat)
C;Date: 02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change 09-Jul-2004
C;Accession: A55610
R;Lovenberg, T.W.; Liaw, C.W.; Grigoriadis, D.E.; Clevenger, W.; Chalmers, D.T.; De Souz
Proc. Natl. Acad. Sci. U.S.A. 92, 836-840, 1995
A;Title: Cloning and characterization of a functionally distinct corticotropin-releasing
A;Reference number: A55610; MUID:95148632; PMID:7846062
A;Accession: A55610
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-411 <LOV>
A;Cross-references: UNIPROT:P47866; EMBL:U16253; NID:g644771; PIDN:AAC52159.1; PID:g6447
C;Genetics:
A;Gene: CRF2R
C;Superfamily: glucagon receptor

Query Match 80.4%; Score 1793; DB 2; Length 411;
Best Local Similarity 80.0%; Pred. No. 9.4e-143;
Matches 333; Conservative 30; Mismatches 45; Indels 8; Gaps 4;

```
Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGP--YCSATIDQIGTCWPRSL 58
              ||:    :::   :|||||  |  :  |         |||  ||: |:||||||||:|
Db          1 MDAA---LLLSLLEANCSL--ALAEELLLDGWGEPPDPEGPYSYCNTTLDQIGTCWPQSA 55

Qy         59 AGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNK-RKYALHYKI 117
              | ||||||| |||:|||||| |||| ||||||| :||| | ||||:| ||| |||:|
Db         56 PGALVERPCPEYFNGIKYNTTRNAYRECLENGTWASRINYSHCEPILDDKQRKYDLHYRI 115

Qy        118 ALIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHN 177
              |||||||||:|::||| |||||| |||||||||:|||||||||||||| |||||:|||
Db        116 ALIINYLGHCVSVVALVAAFLLFLVLRSIRCLRNVIHWNLITTFILRNITWFLLQLIDHE 175

Qy        178 IHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIP 237
              :|| |||||||:|||:|||||||||||||||||||||||||: ||||:|||||||||
Db        176 VHEGNEVWCRCVTTIFNYFVVTNFFWMFVEGCYLHTAIVMTYSTEHLRKWLFLFIGWCIP 235

Qy        238 SPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLR 297
              |||| ||: ||:||||||| |||||  :|||||| :|||||||||||||||||||||||
Db        236 CPIIVAWAVGKLYYENEQCWFGKEPGDLVDYIYQGPIILVLLINFVFLFNIVRILMTKLR 295

Qy        298 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFV 357
              ||||||||||||||||||||||||||||||||||||:||||||||||||||||||||||
Db        296 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDLSQIVFIYFNSFLQSFQGFFV 355

Qy        358 SVFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||| ||||||| ||||||||||:||| ||||||||||||||||||||||||
Db        356 SVFYCFFNGEVRSALRKRWHRWQDHHALRVPVARAMSIPTSPTRISFHSIKQTAAV 411
```

```
RESULT 2
I49149
CRF receptor - mouse
C;Species: Mus musculus (house mouse)
C;Date: 02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change 09-Jul-2004
C;Accession: I49149
R;Perrin, M.; Donaldson, C.; Chen, R.; Blount, A.; Berggren, T.; Bilezikjian, L.; Sawche
Proc. Natl. Acad. Sci. U.S.A. 92, 2969-2973, 1995
A;Title: Identification of a second corticotropin-releasing factor receptor gene and cha
A;Reference number: I49149; MUID:95224061; PMID:7708757
A;Accession: I49149
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-431 <RES>
A;Cross-references: UNIPROT:Q60748; EMBL:U17858; NID:g727254; PIDN:AAA68026.1; PID:g7272
C;Superfamily: glucagon receptor

  Query Match             79.4%;  Score 1770.5;  DB 2;  Length 431;
  Best Local Similarity   84.7%;  Pred. No. 7.6e-141;
  Matches  321;  Conservative   26;  Mismatches   29;  Indels    3;  Gaps    2;

Qy         38 FEGP--YCSATIDQIGTCWPRSLAGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASW 95
              | ||  ||: |:||||||||:|  | |||||||: ||||:|||||| |||| |||||||
Db         53 FSGPYTYCNTTLDQIGTCWPQSAPGALVERPCPEYFNGIKYNTTRNAYRECLENGTWASR 112

Qy         96 MNYSQCVPILDNK-RKYALHYKIALIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIH 154
              :||| | ||||:| ||| |||:||||:||||||:|::||| |||||| |||||||||:||
Db        113 VNYSHCEPILDDKQRKYDLHYRIALIVNYLGHCVSVVALVAAFLLFLVLRSIRCLRNVIH 172

Qy        155 WNLITTFILRNIMWFLLQMIDHNIHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTA 214
              |||||||||||| |||||:||| :|| ||||||||||:||||||||||||||||||||||
Db        173 WNLITTFILRNIAWFLLQLIDHEVHEGNEVWCRCITTIFNYFVVTNFFWMFVEGCYLHTA 232

Qy        215 IVMTYSTDKLRKWVFLFIGWCIPSPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRV 274
              |||||||: ||||:||||||||| |||: ||: ||:||||||| ||| |  :|||||| |
Db        233 IVMTYSTEHLRKWLFLFIGWCIPCPIIIAWAVGKLYYENEQCWFGKEAGDLVDYIYQGPV 292

Qy        275 ILVLLINFVFLFNIVRILMTKLRASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGE 334
              :||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        293 MLVLLINFVFLFNIVRILMTKLRASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGE 352

Qy        335 DDVSQIVFIYFNSFLQSFQGFFVSVFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMS 394
              ||:|||||||||||||||||||||||||| |||||:| |||||||||||:||| ||||||
Db        353 DDLSQIVFIYFNSFLQSFQGFFVSVFYCFFNGEVRAALRKRWHRWQDHHALRVPVARAMS 412

Qy        395 IPTSPTRISFHSIKQTAAV 413
              ||||||||||||||||||
Db        413 IPTSPTRISFHSIKQTAAV 431


RESULT 3
A56726
corticoliberin receptor precursor, cardiac - mouse
C;Species: Mus musculus (house mouse)
C;Date: 21-Jul-1995 #sequence_revision 28-Jul-1995 #text_change 09-Jul-2004
C;Accession: A56726
R;Stenzel, P.; Kesterson, R.; Yeung, W.; Cone, R.D.; Rittenberg, M.B.; Stenzel-Poore, M.
Mol. Endocrinol. 9, 637-645, 1995
A;Title: Identification of a novel murine receptor for corticotropin-releasing hormone e
A;Reference number: A56726; MUID:96015396; PMID:7565810
A;Accession: A56726
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-430 <STE>
A;Cross-references: UNIPROT:Q60748; GB:U19939; NID:g806763; PIDN:AAC52243.1; PID:g806764
C;Superfamily: glucagon receptor
C;Keywords: cardiac muscle; heart

  Query Match             79.4%;  Score 1769;  DB 2;  Length 430;
  Best Local Similarity   84.4%;  Pred. No. 1e-140;
  Matches  319;  Conservative   26;  Mismatches   31;  Indels    2;  Gaps    1;

Qy         38 FEGP--YCSATIDQIGTCWPRSLAGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASW 95
              | ||  ||: |:||||||||:|  | |||||||: ||||:|||||| |||| |||||||
Db         53 FSGPYTYCNTTLDQIGTCWPQSAPGALVERPCPEYFNGIKYNTTRNAYRECLENGTWASR 112

Qy         96 MNYSQCVPILDNKRKYALHYKIALIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIHW 155
              :||| | ||||:|||| |||:||||:||||||:|::||| |||||| |||||||||:|||
Db        113 VNYSHCEPILDDKRKYDLHYRIALIVNYLGHCVSVVALVAAFLLFLVLRSIRCLRNVIHW 172

Qy        156 NLITTFILRNIMWFLLQMIDHNIHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAI 215
              |||||||||||| |||||:||| :|| ||||||||||:||||||||||||||||||||||
Db        173 NLITTFILRNIAWFLLQLIDHEVHEGNEVWCRCITTIFNYFVVTNFFWMFVEGCYLHTAI 232

Qy        216 VMTYSTDKLRKWVFLFIGWCIPSPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVI 275
              ||||||: ||||:||||||||| |||: ||: ||:||||||| ||| |  :|||||| |:
Db        233 VMTYSTEHLRKWLFLFIGWCIPCPIIIAWAVGKLYYENEQCWFGKEAGDLVDYIYQGPVM 292

Qy        276 LVLLINFVFLFNIVRILMTKLRASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGED 335
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        293 LVLLINFVFLFNIVRILMTKLRASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGED 352

Qy        336 DVSQIVFIYFNSFLQSFQGFFVSVFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSI 395
              |:|||||||||||||||||||||||||| |||||:| |  ||||||||:||| |||||||
Db        353 DLSQIVFIYFNSFLQSFQGFFVSVFYCFFNGEVRAALRNGWHRWQDHHALRVPVARAMSI 412

Qy        396 PTSPTRISFHSIKQTAAV 413
              ||||||||||||||||||
Db        413 PTSPTRISFHSIKQTAAV 430


RESULT 4
I49279
sauvagine/corticotropin-releasing factor receptor - mouse
C;Species: Mus musculus (house mouse)
C;Date: 02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change 09-Jul-2004
C;Accession: I49279
R;Kishimoto, T.; Pearse, R.V.
Proc. Natl. Acad. Sci. U.S.A. 92, 1108-1112, 1995
A;Title: A sauvagine/corticotropin-releasing factor receptor expressed in heart and skel
A;Reference number: I49279; MUID:95166778; PMID:7755719
A;Accession: I49279
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-431 <KIS>
A;Cross-references: UNIPROT:Q60748; EMBL:U21729; NID:g717137; PIDN:AAC52174.1; PID:g7171
C;Superfamily: glucagon receptor

  Query Match             78.4%;  Score 1746.5;  DB 2;  Length 431;
  Best Local Similarity   83.9%;  Pred. No. 7.8e-139;
  Matches  318;  Conservative   26;  Mismatches   32;  Indels    3;  Gaps    2;

Qy         38 FEGP--YCSATIDQIGTCWPRSLAGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASW 95
              | ||  ||: |:||||||||:|  | |||||||: ||||:|||||| |||| |||||||
Db         53 FSGPYTYCNTTLDQIGTCWPQSAPGALVERPCPEYFNGIKYNTTRNAYRECLENGTWASR 112

Qy         96 MNYSQCVPILDNK-RKYALHYKIALIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIH 154
              :||| | ||||:| ||| |||:||||:||||||:|::||| |||||| |||||||||:||
Db        113 VNYSHCEPILDDKQRKYDLHYRIALIVNYLGHCVSVVALVAAFLLFLVLRSIRCLRNVIH 172

Qy        155 WNLITTFILRNIMWFLLQMIDHNIHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTA 214
              |||||||||||| |||||:||| :|| ||||||||||:||||||||||||||||||||||
Db        173 WNLITTFILRNIAWFLLQLIDHEVHEGNEVWCRCITTIFNYFVVTNFFWMFVEGCYLHTA 232

Qy        215 IVMTYSTDKLRKWVFLFIGWCIPSPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRV 274
              |||||||: ||||:||||||||| |||: ||: ||:||||||| ||| |  :|||||| |
Db        233 IVMTYSTEHLRKWLFLFIGWCIPCPIIIAWAVGKLYYENEQCWFGKEAGDLVDYIYQGPV 292

Qy        275 ILVLLINFVFLFNIVRILMTKLRASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGE 334
              :||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        293 MLVLLINFVFLFNIVRILMTKLRASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGE 352

Qy        335 DDVSQIVFIYFNSFLQSFQGFFVSVFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMS 394
              ||:|||||||||||||||||||||||||| |||||:| |||||  ||||:||| | ||||
Db        353 DDLSQIVFIYFNSFLQSFQGFFVSVFYCFFNGEVRAALRKRWHSGQDHHALRVPVRRAMS 412
```

```
Qy        395 IPTSPTRISFHSIKQTAAV 413
              ||||||||||||||||||||
Db        413 IPTSPTRISFHSIKQTAAV 431


RESULT 5
S39535
corticotropin-releasing hormone receptor - mouse
C;Species: Mus musculus (house mouse)
C;Date: 07-Oct-1994 #sequence_revision 10-Nov-1995 #text_change 09-Jul-2004
C;Accession: S39535
R;Vita, N.; Laurent, P.; Lefort, S.; Chalon, P.; Lelias, J.M.; Kaghad, M.; le Fur, G.; C
FEBS Lett. 335, 1-5, 1993
A;Title: Primary structure and functional expression of mouse pituitary and human brain
A;Reference number: S39534; MUID:94063063; PMID:8243652
A;Accession: S39535
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-415 <VIT>
A;Cross-references: UNIPROT:P35347; EMBL:X72305; NID:g436120; PIDN:CAA51053.1; PID:g4361
A;Note: the sequence from Fig. 1 is inconsistent with that from Fig. 3 in having an addi
C;Superfamily: glucagon receptor
C;Keywords: G protein-coupled receptor; transmembrane protein

  Query Match             69.8%;  Score 1556.5;  DB 2;  Length 415;
  Best Local Similarity   74.9%;  Pred. No. 6.4e-123;
  Matches  281;  Conservative   44;  Mismatches   49;  Indels    1;  Gaps    1;

Qy         40 GPYCSATIDQIGTCWPRSLAGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYS 99
              |  |:|::| |||||||| ||:|| |||| | |:||||| | |||| ||:||: :|||
Db         41 GLQCNASVDLIGTCWPRSPAGQLVVRPCPAFFYGVRYNTTNNGYRECLANGSWAARVNYS 100

Qy        100 QCVPILDNKRKYALHYKIALIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLIT 159
              :|  ||: ::|  :|| ||:||||||||||::||::||:||| ||||||||||||||:
Db        101 ECQEILNEEKKSKVHYHIAVIINYLGHCISLVALLVAFVLFLRLRSIRCLRNIIHWNLIS 160

Qy        160 TFILRNIMWFLLQM-IDHNIHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMT 218
              |||||  ||::|: :  :|:||  ||| :|  |||| |||||||| ||||||||||:|
Db        161 AFILRNATWFVVQLTVSPEVHQSNVAWCRLVTAAYNYFHVTNFFWMFGEGCYLHTAIVLT 220

Qy        219 YSTDKLRKWVFLFIGWCIPSPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVL 278
              ||||:||||:|: ||| :| |||| ||| ||:|:||:|| || || | |||||| :||||
Db        221 YSTDRLRKWMFVCIGWGVPFPIIVAWAIGKLYYDNEKCWFGKRPGVYTDYIYQGPMILVL 280

Qy        279 LINFVFLFNIVRILMTKLRASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVS 338
              ||||:|||||||||||||||||||||||||||||||||||||||||||||||||||:||
Db        281 LINFIFLFNIVRILMTKLRASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDEVS 340

Qy        339 QIVFIYFNSFLQSFQGFFVSVFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTS 398
              ::|||||||||:|||||||||||||| ||||| |||| |||| ||:| ||||||||||
Db        341 RVVFIYFNSFLESFQGFFVSVFYCFLNSEVRSAIRKRWRRWQDKHSIRARVARAMSIPTS 400

Qy        399 PTRISFHSIKQTAAV 413
              |||:|||||||: ||
Db        401 PTRVSFHSIKQSTAV 415


RESULT 6
I58144
corticotropin-releasing factor receptor - rat
C;Species: Rattus norvegicus (Norway rat)
C;Date: 26-Jul-1996 #sequence_revision 26-Jul-1996 #text_change 09-Jul-2004
C;Accession: I58144
R;Chang, C.P.; Pearse, R.V.; O'Connell, S.; Rosenfeld, M.G.
Neuron 11, 1187-1195, 1993
A;Title: Identification of a seven transmembrane helix receptor for corticotropin-releas
A;Reference number: I58144; MUID:94099969; PMID:8274282
A;Accession: I58144
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-415 <RES>
A;Cross-references: UNIPROT:P35353; GB:L25438; NID:g450298; PIDN:AAA16441.1; PID:g457615
C;Superfamily: glucagon receptor

  Query Match             69.6%;  Score 1551.5;  DB 2;  Length 415;
  Best Local Similarity   74.7%;  Pred. No. 1.7e-122;
  Matches  280;  Conservative   44;  Mismatches   50;  Indels    1;  Gaps    1;

Qy         40 GPYCSATIDQIGTCWPRSLAGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYS 99
              |  |:|::| |||||||| ||:|| |||| | |:||||| | |||| ||:||: :|||
Db         41 GLQCNASVDLIGTCWPRSPAGQLVVRPCPAFFYGVRYNTTNNGYRECLANGSWAARVNYS 100

Qy        100 QCVPILDNKRKYALHYKIALIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLIT 159
              :|  ||: ::|  :|| :|:||||||||||::||::||:||| ||||||||||||||:
Db        101 ECQEILNEEKKSKVHYHVAVIINYLGHCISLVALLVAFVLFLRLRSIRCLRNIIHWNLIS 160

Qy        160 TFILRNIMWFLLQM-IDHNIHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMT 218
              |||||  ||::|: :  :|:||  ||| :|  |||| |||||||| ||||||||||:|
Db        161 AFILRNATWFVVQLTVSPEVHQSNVAWCRLVTAAYNYFHVTNFFWMFGEGCYLHTAIVLT 220

Qy        219 YSTDKLRKWVFLFIGWCIPSPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVL 278
              ||||:||||:|: ||| :| |||| ||| || |:||:|| || || | |||||| :||||
Db        221 YSTDRLRKWMFVCIGWGVPFPIIVAWAIGKLHYDNEKCWFGKRPGVYTDYIYQGPMILVL 280

Qy        279 LINFVFLFNIVRILMTKLRASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVS 338
              ||||:|||||||||||||||||||||||||||||||||||||||||||||||||||:||
Db        281 LINFIFLFNIVRILMTKLRASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDEVS 340

Qy        339 QIVFIYFNSFLQSFQGFFVSVFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTS 398
              ::|||||||||:|||||||||||||| ||||| |||| |||| ||:| ||||||||||
Db        341 RVVFIYFNSFLESFQGFFVSVFYCFLNSEVRSAIRKRWRRWQDKHSIRARVARAMSIPTS 400

Qy        399 PTRISFHSIKQTAAV 413
              |||:|||||||: ||
Db        401 PTRVSFHSIKQSTAV 415


RESULT 7
A48260
corticoliberin receptor, long splice form - human
N;Alternate names: corticoliberin binding protein; corticotropin releasing factor recept
C;Species: Homo sapiens (man)
C;Date: 31-May-1996 #sequence_revision 11-Apr-1997 #text_change 09-Jul-2004
C;Accession: I60975; A48260; S39534
R;Chen, R.; Lewis, K.A.; Perrin, M.H.; Vale, W.W.
Proc. Natl. Acad. Sci. U.S.A. 90, 8967-8971, 1993
A;Title: Expression cloning of a human corticotropin-releasing factor (CRF) receptor.
A;Reference number: A48260; MUID:94022296; PMID:7692441
A;Accession: I60975
A;Status: translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-444 <RES>
A;Cross-references: UNIPROT:P34998; GB:L23333; NID:g408691; PIDN:AAA35719.1; PID:g408692
A;Experimental source: Cushing corticotropic cell tumor
A;Accession: A48260
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-145,175-444 <RE2>
A;Cross-references: GB:L23332; NID:g408689; PIDN:AAA35718.1; PID:g408690
R;Vita, N.; Laurent, P.; Lefort, S.; Chalon, P.; Lelias, J.M.; Kaghad, M.; le Fur, G.; C
FEBS Lett. 335, 1-5, 1993
A;Title: Primary structure and functional expression of mouse pituitary and human brain
A;Reference number: S39534; MUID:94063063; PMID:8243652
A;Accession: S39534
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-145,175-444 <VIT>
A;Cross-references: EMBL:X72304; NID:g436118; PIDN:CAA51052.1; PID:g436119
A;Note: the sequence from Fig. 1 is inconsistent with that from Fig. 3 in having an addi
C;Genetics:
A;Gene: GDB:CRHR1; CRHR; CRF-R; CRF1
A;Cross-references: GDB:235922; OMIM:122561
A;Map position: 17q12-17q22
C;Superfamily: glucagon receptor
C;Keywords: alternative splicing; transmembrane protein
```

```
  Query Match             69.2%;  Score 1541.5;  DB 2;  Length 444;
  Best Local Similarity   67.8%;  Pred. No. 1.2e-121;
  Matches  287;  Conservative   46;  Mismatches   57;  Indels   33;  Gaps    4;

Qy         22 AFQDSFLHSESSSF-FGFEGPYCSATIDQIGTCWPRSLAGELVERPCPDSFNGIRYNTTR 80
              :  ||    | || |       |  |:|::| |||||||| ||:|| ||||  | |:|||||
Db         24 SLQDQ--HCESLSLASNISGLQCNASVDLIGTCWPRSPAGQLVVRPCPAFFYGVRYNTTN 81

Qy         81 NVYRECFENGTWASWMNYSQCVPILDNKRKYALHYKIALIINYLGHCISILALVIAFLLF 140
              | ||||  ||:||: :|||:|  ||: ::|  :|| :|:||||||||||::||::||:||
Db         82 NGYRECLANGSWAARVNYSECQEILNEEKKSKVHYHVAVIINYLGHCISLVALLVAFVLF 141

Qy        141 LCL----------------------------RSIRCLRNIIHWNLITTFILRNIMWFLL 171
              | |                            ||||||||||||||: |||||  ||::
Db        142 LRLRPGCTHWGDQADGALEVGAPWSGAPFQVRRSIRCLRNIIHWNLISAFILRNATWFVV 201

Qy        172 QM-IDHNIHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFL 230
              |: :   :|:||  ||| :|  |||| |||||||| ||||||||||:|||||:||||:|:
Db        202 QLTMSPEVHQSNVGWCRLVTAAYNYFHVTNFFWMFGEGCYLHTAIVLTYSTDRLRKWMFI 261

Qy        231 FIGWCIPSPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVR 290
              ||| :| |||| ||| ||:|:||:|| || || | |||||| :|||||||:|||||||
Db        262 CIGWGVPFPIIVAWAIGKLYYDNEKCWFGKRPGVYTDYIYQGPMILVLLINFIFLFNIVR 321

Qy        291 ILMTKLRASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQ 350
              ||||||||||||||||||||||||||||||||||||||||||:||::|||||||||:
Db        322 ILMTKLRASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDEVSRVVFIYFNSFLE 381

Qy        351 SFQGFFVSVFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQT 410
              |||||||||||||| ||||| |||||||| ||:| ||||||||||||:|||||||:
Db        382 SFQGFFVSVFYCFLNSEVRSAIRKRWHRWQDKHSIRARVARAMSIPTSPTRVSFHSIKQS 441

Qy        411 AAV 413
              ||
Db        442 TAV 444


RESULT 8
I38879
corticotropin releasing hormone receptor variant - human
C;Species: Homo sapiens (man)
C;Date: 29-May-1998 #sequence_revision 29-May-1998 #text_change 09-Jul-2004
C;Accession: I38879
R;Ross, P.C.; Kostas, C.M.; Ramabhadran, T.V.
Biochem. Biophys. Res. Commun. 205, 1836-1842, 1994
A;Title: A variant of the human corticotropin-releasing factor (CRF) receptor: cloning,
A;Reference number: I38879; MUID:95110332; PMID:7811272
A;Accession: I38879
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-375 <RES>
A;Cross-references: UNIPROT:P34998; EMBL:U16273; NID:g606973; PIDN:AAC50073.1; PID:g6069
C;Superfamily: glucagon receptor

  Query Match             63.2%;  Score 1408.5;  DB 2;  Length 375;
  Best Local Similarity   75.4%;  Pred. No. 1.5e-110;
  Matches  255;  Conservative   41;  Mismatches   41;  Indels    1;  Gaps    1;

Qy         77 NTTRNVYRECFENGTWASWMNYSQCVPILDNKRKYALHYKIALIINYLGHCISILALVIA 136
              | : | ||||  ||:||: :|||:|  ||: ::|  :|| :|:|||||||||::||::|
Db         38 NISDNGYRECLANGSWAARVNYSECQEILNEEKKSKVHYHVAVIINYLGHCISLVALLVA 97

Qy        137 FLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQM-IDHNIHESNEVWCRCITTIYNY 195
              |:||| |||||||||||||||: |||||  ||::|: :   :|:||  ||| :|  |||
Db         98 FVLFLRLRSIRCLRNIIHWNLISAFILRNATWFVVQLTMSPEVHQSNVGWCRLVTAAYNY 157

Qy        196 FVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIPSPIIVTWAICKLFYENEQ 255
              | |||||||| |||||||||:|||||:||||:|: ||| :| |||| ||| ||:|:||:
Db        158 FHVTNFFWMFGEGCYLHTAIVLTYSTDRLRKWMFICIGWGVPFPIIVAWAIGKLYYDNEK 217

Qy        256 CWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLRASTTSETIQYRKAVKATL 315
              || || || | |||||| :||||||||:|||||||||||||||||||||||||||||||
Db        218 CWFGKRPGVYTDYIYQGPMILVLLINFIFLFNIVRILMTKLRASTTSETIQYRKAVKATL 277

Qy        316 VLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFVSVFYCFLNGEVRSAARKR 375
              |||||||||||||||||||:||::|||||||||:|||||||||||||| ||||| |||
Db        278 VLLPLLGITYMLFFVNPGEDEVSRVVFIYFNSFLESFQGFFVSVFYCFLNSEVRSAIRKR 337

Qy        376 WHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||| ||:| ||||||||||||||:|||||||: ||
Db        338 WHRWQDKHSIRARVARAMSIPTSPTRVSFHSIKQSTAV 375


RESULT 9
A39286
parathyroid hormone / parathyroid hormone-related peptide - North American opossum
C;Species: Didelphis virginiana, Didelphis marsupialis virginiana (North American opossu
C;Date: 24-Jan-1992 #sequence_revision 24-Jan-1992 #text_change 09-Jul-2004
C;Accession: A39286
R;Jueppner, H.; Abou-Samra, A.B.; Freeman, M.; Kong, X.F.; Schipani, E.; Richards, J.; Ko
Science 254, 1024-1026, 1991
A;Title: A G protein-linked receptor for parathyroid hormone and parathyroid hormone-rela
A;Reference number: A39286; MUID:92054592; PMID:1658941
A;Accession: A39286
A;Status: preliminary; not compared with conceptual translation
A;Molecule type: mRNA
A;Residues: 1-585 <JUE>
A;Cross-references: UNIPROT:P25107; GB:M74445
C;Superfamily: glucagon receptor
C;Keywords: G protein-coupled receptor; transmembrane protein

  Query Match             27.5%;  Score 612;  DB 2;  Length 585;
  Best Local Similarity   33.3%;  Pred. No. 1.4e-43;
  Matches  125;  Conservative   72;  Mismatches  134;  Indels   44;  Gaps   10;

Qy         42 YCSATIDQIGTCWPRSLAGELVERPCPDSFNGIRYNTTRNVYRECFENGTW-------AS 94
              :|    | |  |||  : |::|  |||| |    :|     || |  ||:|        :
Db        104 FCLPEWDNI-VCWPAGVPGKVVAVPCPDYF--YDFNHKGRAYRRCDSNGSWELVPGNNRT 160

Qy         95 WMNYSQCVPILDNK-RKYALHYKIALIINYLGHCISILALVIAFLLFLCLRSIRCLRNII 153
              | |||:||  | |: |:  :  :: :|   :|: ||: :| :| |:    | : | || |
Db        161 WANYSECVKFLTNETRREVFDRLGMIYT-VGYSISLGSLTVAVLILGYFRRLHCTRNYI 219

Qy        154 HWNLITTFILRNIMWFLLQMIDHNIHESNE----------------------VWCRCIT 190
              | :|  :|:|| :  |:  : ::   ::|                      | ||
Db        220 HMHLFVSFMLRAVSIFIKDAVLYSGVSTDEIERITEEELRAFTEPPPADKAGFVGCRVAV 279

Qy        191 TIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIPSPIIVTWAICKLF 250
              |:: ||: ||::|: ||| |||: | | : ::|   | |   || :|:  :  |   :
Db        280 TVFLYFLTTNYYWILVEGLYLHSLIFMAFFSEKKYLWGFTLFGWGLPAVFVAVWVTVRAT 339

Qy        251 YENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLR---ASTTSETIQY 307
              | :||      |   :| |  ::  :::||:   ||:|:| ||||    |       ||
Db        340 LANTECWDLSSGNK--KWIIQVPILAAIVVNFILFINIIRVLATKLRETNAGRCDTRQQY 397

Qy        308 RKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVF---IYFNSFLQSFQGFFVSVFYCFL 364
              || :|:||||:|| |: |::|   |    :|| |::   :::     |||||||:: |||
Db        398 RKLLKSTLVLMPLFGVHYIVFMATP-YTEVSGILWQVQMHYEMLFNSFQGFFVAIIYCFC 456

Qy        365 NGEVRSAARKRWHRW 379
              ||||::  :| | ||
Db        457 NGEVQAEIKKSWSRW 471


RESULT 10
S33746
calcitonin receptor c1a precursor - rat
C;Species: Rattus norvegicus (Norway rat)
C;Date: 02-Dec-1993 #sequence_revision 10-Nov-1995 #text_change 09-Jul-2004
C;Accession: S33746
R;Albrandt, K.; Mull, E.; Brady, E.M.G.; Herich, J.; Moore, C.X.; Beaumont, K.
FEBS Lett. 325, 225-232, 1993
A;Title: Molecular cloning of two receptors from rat brain with high affinity for salmon
A;Reference number: S33746; MUID:93307500; PMID:8391477
A;Accession: S33746
A;Molecule type: mRNA
```

```
A;Residues: 1-479 <ALB>
A;Cross-references: UNIPROT:P32214; GB:L14617; NID:g347429; PIDN:AAA65964.1; PID:g347430
C;Superfamily: glucagon receptor
C;Keywords: transmembrane protein

  Query Match             26.7%;  Score 595.5;  DB 2;  Length 479;
  Best Local Similarity   33.8%;  Pred. No. 2.8e-42;
  Matches  138;  Conservative   77;  Mismatches  152;  Indels   41;  Gaps   14;

Qy         19 LLDAFQDSFLHSESSSFFGFEGPYCSATIDQIGTCWPRSLAGELVERPCPDSFNGIRYNT 78
              ||||    :   :    :  |||||: | |    ||  : || :  : ||| |    ::
Db         48 LLDAQYKCYDRIQQLPPYEGEGPYCNRTWDG-WMCWDDTPAGVMSYQHCPDYFPD--FDP 104

Qy         79 TRNVYRECFENGTW-------ASWMNYSQCVPILDNK--RKYALHYKIALIINYLGHCIS 129
              |  | : | ||| |        :| ||: |     :|    | |:| :||:    || :|
Db        105 TEKVSKYCDENGEWFRHPDSNRTWSNYTLCNAFTPDKLHNAYVLYY-LALV----GHSMS 159

Qy        130 ILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMID----HNIHESNEVW 185
              | ||: :  :||  ::: | |  :| |:  |:|| :|:  :: :::     ::   : :
Db        160 IAALIASMGIFLFFKNLSCQRVTLHKNMFLTYILNSII-IIIHLVEVVPNGDLVRRDPIS 218

Qy        186 CRCITTIYNYFVVTNFFWMFVEGCYLHTAIVM-TYSTDKLRKWVFLFIGWCIPSPIIVTW 244
              |: :   : | :  |:|||  || |||| |||  :: |:  :| :| :||  |    :
Db        219 CKILHFFHQYMMACNYFWMLCEGIYLHTLIVMAVFTEDQRLRWYYL-LGWGFPIVPTIIH 277

Qy        245 AICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLRASTTSET 304
              || :  | |: ||:  |   :: ||  | |:  |::|| || ||||:|:||:| :  :|
Db        278 AITRAVYYNDNCWLSTE--THLLYIIHGPVMAALVVNFFFLLNIVRVLVTKMRQTHEAEA 335

Qy        305 IQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFVSVFYCFL 364
                | ||||||:||:||||| :::|   |    : :| : |    |  ||||||:  |||
Db        336 YMYLKAVKATMVLVPLLGIQFVVFPWRPSNKVLGKI-YDYLMHSLIHFQGFFVATIYCFC 394

Qy        365 NGEVRSAARKRW--------HRWQDHHSLRVRVARAMSIPTSPTRISF 404
              | ||:   :::|         |||         ||  |       |  ::|
Db        395 NHEVQVTLKRQWAQFKIQWSHRWGRRRRPTNRVVSA------PRAVAF 436


RESULT 11
I49154
calcitonin receptor 1b - mouse
C;Species: Mus musculus (house mouse)
C;Date: 02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change 09-Jul-2004
C;Accession: I49154
R;Yamin, M.; Gorn, A.H.; Flannery, M.R.; Jenkins, N.A.; Gilbert, D.J.; Copeland, N.G.; T
Endocrinology 135, 2635-2643, 1994
A;Title: Cloning and characterization of a mouse brain calcitonin receptor complementary
A;Reference number: I49154; MUID:95080136; PMID:7988453
A;Accession: I49154
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-515 <RES>
A;Cross-references: UNIPROT:Q60755; EMBL:U18542; NID:g604510; PIDN:AAA69521.1; PID:g6045
C;Superfamily: glucagon receptor

  Query Match             26.6%;  Score 593;  DB 2;  Length 515;
  Best Local Similarity   32.1%;  Pred. No. 4.9e-42;
  Matches  139;  Conservative   73;  Mismatches  153;  Indels   68;  Gaps   14;

Qy         19 LLDAFQDSFLHSESSSFFGFEGPYCSATIDQIGTCWPRSLAGELVERPCPDSFNGIRYNT 78
              ||||    :         :  || ||: | |    ||  : ||    : ||| |    ::|
Db         48 LLDAQYKCYDRIHQLPSYEGEGLYCNRTWDG-WMCWDDTPAGATAYQHCPDYFPD--FDT 104

Qy         79 TRNVYRECFENGTW-------ASWMNYSQCVPILDNK--RKYALHYKIALIINYLGHCIS 129
                | : | ||| |        :| ||: |       |    | :|: :||:    || :|
Db        105 AEKVSKYCDENGEWFRHPDSNRTWSNYTLCNAFTSEKLQNAYVLYY-LALV----GHSLS 159

Qy        130 ILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMID------------H 176
              | ||| : |:|   ::: | |  :| ::  |:|| :|:  :: :::            |
Db        160 IAALVASMLIFWIFKNLSCQRVTLHKHMFLTYILNSII-IIIHLVEVVPNGDLVRRDPMH 218

Qy        177 NIHESNEVW--------------------------CRCITTIYNYFVVTNFFWMFVEG 208
                | :  :|                         |: :  :: | :  |:|||  ||
Db        219 IFHHNTHMWTMQWELSPPLPLCAHEGKMDPHASEVISCKVLHFLHQYMMSCNYFWMLCEG 278

Qy        209 CYLHTAIVMTYSTDKLR-KWVFLFIGWCIPSPIIVTWAICKLFYENEQCWIGKEPGKYID 267
              |||| |||    ||: | :| :| :||  |    :  || :  | |: ||:  |    ::
Db        279 IYLHTLIVMAVFTDEQRLRWYYL-LGWGFPIVPTIIHAITRALYYNDNCWLSAE--THLL 335

Qy        268 YIYQGRVILVLLINFVFLFNIVRILMTKLRASTTSETIQYRKAVKATLVLLPLLGITYML 327
              ||  | |:: |::|| || ||||:|:||:| :  :|:  | ||||||:||:||||| :::
Db        336 YIIHGPVMVALVVNFFFLLNIVRVLVTKMRQTHEAESYMYLKAVKATMVLVPLLGIQFVV 395

Qy        328 FFVNPGEDDVSQIVFIYFNSFLQSFQGFFVSVFYCFLNGEVRSAARKRWH----RWQDHH 383
              |   |    : :| : |    |  ||||||:  ||| | ||:   :::|     :|
Db        396 FPWRPSNKVLGKI-YDYLMHSLIHFQGFFVATIYCFCNHEVQVTLKRQWTQFKIQWSQRW 454

Qy        384 SLRVRVARAMSIP 396
              |     | :| |
Db        455 GRRRPTNRVVSAP 467


RESULT 12
I60800
calcitonin receptor c1b precursor - rat
C;Species: Rattus norvegicus (Norway rat)
C;Date: 02-Aug-1996 #sequence_revision 02-Aug-1996 #text_change 09-Jul-2004
C;Accession: I60800; S33747
R;Sexton, P.M.; Houssami, S.; Hilton, J.M.; O'Keeffe, L.M.; Center, R.J.; Gillespie, M.
Mol. Endocrinol. 7, 815-821, 1993
A;Title: Identification of brain isoforms of the rat calcitonin receptor.
A;Reference number: A37430; MUID:93368608; PMID:8395656
A;Accession: I60800
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-515 <RES>
A;Cross-references: UNIPROT:P32214; GB:L13040; NID:g294532; PIDN:AAA03031.1; PID:g294533
R;Albrandt, K.; Mull, E.; Brady, E.M.G.; Herich, J.; Moore, C.X.; Beaumont, K.
FEBS Lett. 325, 225-232, 1993
A;Title: Molecular cloning of two receptors from rat brain with high affinity for salmon
A;Reference number: S33746; MUID:93307500; PMID:8391477
A;Accession: S33747
A;Molecule type: mRNA
A;Residues: 1-147,'L',149-458,'R',459-477,'L',479-515 <ALB>
A;Cross-references: GB:L14618; NID:g347431; PIDN:AAA65965.1; PID:g347432
C;Superfamily: glucagon receptor
C;Keywords: G protein-coupled receptor; transmembrane protein

  Query Match             26.5%;  Score 590;  DB 2;  Length 515;
  Best Local Similarity   32.5%;  Pred. No. 8.8e-42;
  Matches  136;  Conservative   71;  Mismatches  143;  Indels   68;  Gaps   12;

Qy         19 LLDAFQDSFLHSESSSFFGFEGPYCSATIDQIGTCWPRSLAGELVERPCPDSFNGIRYNT 78
              ||||    :   :    :  |||||: | |    ||  : || :  : ||| |    ::
Db         48 LLDAQYKCYDRIQQLPPYEGEGPYCNRTWDG-WMCWDDTPAGVMSYQHCPDYFPD--FDP 104

Qy         79 TRNVYRECFENGTW-------ASWMNYSQCVPILDNKRKYA-LHYKIALIINYLGHCISI 130
              |  | : | ||| |        :| ||: |     :|    | : | :||:    || :||
Db        105 TEKVSKYCDENGEWFRHPDSNRTWSNYTLCNAFTPDKLHNAYVSYYLALV----GHSMSI 160

Qy        131 LALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFL----------------LQMI 174
              ||: :  :||  ::: | |  :| |:  |:|| :|:  :                  : :
Db        161 AALIASMGIFLFFKNLSCQRVTLHKNMFLTYILNSIIIIIHLVEVVPNGDLVRRDPMHIF 220

Qy        175 DHNI----------------------HESNEVWCRCITTIYNYFVVTNFFWMFVEGCY 210
              ||                        |:|  : |: :   : | :  |:|||  || |
Db        221 HHNTYMWTMQWELSPPLPLSAHEGKMDPHDSEVISCKILHFFHQYMMACNYFWMLCEGIY 280

Qy        211 LHTAIVM-TYSTDKLRKWVFLFIGWCIPSPIIVTWAICKLFYENEQCWIGKEPGKYIDYI 269
              ||| |||  :: |:  :| :| :||  |    :  || :  | |: ||:  |    :: ||
Db        281 LHTLIVMAVFTEDQRLRWYYL-LGWGFPIVPTIIHAITRAVYYNDNCWLSTE--THLLYI 337

Qy        270 YQGRVILVLLINFVFLFNIVRILMTKLRASTTSETIQYRKAVKATLVLLPLLGITYMLFF 329
                | |:  |::|| || ||||:|:||:| :  :|    | ||||||:||:||||| :::|
Db        338 IHGPVMAALVVNFFFLLNIVRVLVTKMRQTHEAEAYMYLKAVKATMVLVPLLGIQFVVFP 397
```

```
Qy        330 VNPGEDDVSQIVFIYFNSFLQSFQGFFVSVFYCFLNGEVRSAARKRW--------HRW 379
              |    : :| : |     |  ||||||:  ||| | ||:   :::|        |||
Db        398 WRPSNKVLGKI-YDYLMHSLIHFQGFFVATIYCFCNHEVQVTLKRQWAQFKIQWSHRW 454


RESULT 13
A37430
calcitonin receptor - rat
C;Species: Rattus norvegicus (Norway rat)
C;Date: 02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change 24-Nov-1999
C;Accession: A37430
R;Sexton, P.M.; Houssami, S.; Hilton, J.M.; O'Keeffe, L.M.; Center, R.J.; Gillespie, M.T
Mol. Endocrinol. 7, 815-821, 1993
A;Title: Identification of brain isoforms of the rat calcitonin receptor.
A;Reference number: A37430; MUID:93368608; PMID:8395656
A;Accession: A37430
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-478 <RES>
A;Cross-references: GB:L13041; NID:g294530; PIDN:AAA03030.1; PID:g294531
C;Superfamily: glucagon receptor

  Query Match             26.4%;  Score 589.5;  DB 2;  Length 478;
  Best Local Similarity   34.6%;  Pred. No. 9e-42;
  Matches  132;  Conservative   75;  Mismatches  142;  Indels   33;  Gaps   12;

Qy         19 LLDAFQDSFLHSESSSFFGFEGPYCSATIDQIGTCWPRSLAGELVERPCPDSFNGIRYNT 78
              ||||    :   :    :  |||||: | |    ||  : || :  : ||| |    ::
Db         48 LLDAQYKCYDRIQQLPPYEGEGPYCNRTWDG-WMCWDDTPAGVMSYQHCPDYFPD--FDP 104

Qy         79 TRNVYRECFENGTW-------ASWMNYSQCVPILDNKRKYA-LHYKIALIINYLGHCISI 130
              |  | : | ||| |         :| ||: |     :|    | : | :||:    || :||
Db        105 TEKVSKYCDENGEWFRHPDSNRTWSNYTLCNAFTPDKLHNAYVSYYLALV----GHSMSI 160

Qy        131 LALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMID----HNIHESNEVWC 186
              ||: :  :||  ::: | |  :| |:  |:|| :|:  :: ::::     ::   : : |
Db        161 AALIASMGIFLFFKNLSCQRVTLHKNMFLTYILNSII-IIIHLVEVVPNGDLVRRDPISC 219

Qy        187 RCITTIYNYFVVTNFFWMFVEGCYLHTAIVM-TYSTDKLRKWVFLFIGWCIPSPIIVTWA 245
              : :   : | :  |:|||  || |||| |||  :: |:  :| :| :||  |    :  |
Db        220 KILHFFHQYMMACNYFWMLCEGIYLHTLIVMAVFTEDQRLRWYYL-LGWGFPIVPTIIHA 278

Qy        246 ICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLRASTTSETI 305
              | :  | |: ||:  |   :: ||  | |:  |::|| || ||||:|:||:| :  :|
Db        279 ITRAVYYNDNCWLSTE--THLLYIIHGPVMAALVVNFFFLLNIVRVLVTKMRQTHEAEAY 336

Qy        306 QYRKAVKATLVLLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFVSVFYCFLN 365
              | |||||:||:|||| :::|   |    : :| : |    |  ||||||:  ||| |
Db        337 MYLKAVKATMVLVPLLGIQFVVFPWRPSNKVLGKI-YDYLMHSLIHFQGFFVATIYCFCN 395

Qy        366 GEVRSAARKRW--------HRW 379
              ||:   :::|        |||
Db        396 HEVQVTLKRQWAQFKIQWSHRW 417


RESULT 14
A49191
parathyroid hormone/PTH-related peptide receptor - human
N;Alternate names: parathyroid hormone/parathyroid hormone related peptide receptor
C;Species: Homo sapiens (man)
C;Date: 19-Dec-1993 #sequence_revision 18-Nov-1994 #text_change 09-Jul-2004
C;Accession: I38139; A49191; I38113; G01562; S29610
R;Schipani, E.; Weinstein, L.S.; Bergwitz, C.; Iida-Klein, A.; Kong, X.F.; Stuhrmann, M.
Kronenberg, H.M.; Abou-Samra, A.B.; Segre, G.V.; Jueppner, H.
J. Clin. Endocrinol. Metab. 80, 1611-1621, 1995
A;Title: Pseudohypoparathyroidism type Ib is not caused by mutations in the coding exons
A;Reference number: I38139; MUID:95263723; PMID:7745008
A;Accession: I38139
A;Status: translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-593 <RES>
A;Cross-references: UNIPROT:Q03431; EMBL:U22409; NID:g897594; PIDN:AAB60657.1; PID:g8975
R;Schipani, E.; Karga, H.; Karaplis, A.C.; Potts Jr., J.T.; Kronenberg, H.M.; Segre, G.V
Endocrinology 132, 2157-2165, 1993
A;Title: Identical complementary deoxyribonucleic acids encode a human renal and bone pa
A;Reference number: A49191; MUID:93238641; PMID:8386612
A;Accession: A49191
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-593 <SCH>
A;Cross-references: GB:L04308; NID:g190721; PIDN:AAA36525.1; PID:g190722
A;Note: sequence extracted from NCBI backbone (NCBIN:130233, NCBIP:130234)
R;Schneider, H.; Feyen, J.H.; Seuwen, K.; Movva, N.R.
Eur. J. Pharmacol. 246, 149-155, 1993
A;Title: Cloning and functional expression of a human parathyroid hormone receptor.
A;Reference number: I38113; MUID:93387403; PMID:8397094
A;Accession: I38113
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-593 <RE2>
A;Cross-references: EMBL:X68596; NID:g396812; PIDN:CAA48589.1; PID:g396813
R;Levine, M.
submitted to the EMBL Data Library, November 1994
A;Reference number: G07787
A;Accession: G01562
A;Status: translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-593 <LEV>
A;Cross-references: EMBL:U17418; NID:g596129; PIDN:AAA56774.1; PID:g596130
C;Genetics:
A;Introns: 25/3; 60/1; 105/1; 142/1; 181/3; 213/2; 278/3; 330/1; 350/2; 372/3; 404/2; 45
C;Superfamily: glucagon receptor
C;Keywords: G protein-coupled receptor; transmembrane protein

  Query Match             26.4%;  Score 587.5;  DB 2;  Length 593;
  Best Local Similarity   32.3%;  Pred. No. 1.6e-41;
  Matches  123;  Conservative   69;  Mismatches  144;  Indels   45;  Gaps   10;

Qy         38 FEGPYCSATIDQIGTCWPRSLAGELVERPCPDSFNGIRYNTTRNVYRECFENGTW----- 92
              : |  |     | |  |||     ||:|  ||||       :|    : || |  ||:|
Db        103 YRGRPCLPEWDHI-LCWPLGAPGEVVAVPCPDYI--YDFNHKGHAYRRCDRNGSWELVPG 159

Qy         93 --ASWMNYSQCVPILDNK-RKYALHYKIALIINYLGHCISILALVIAFLLFLCLRSIRCL 149
                :| |||:||  | |: |:  :  :: :|    :|: :|: :| :| |:    | : |
Db        160 HNRTWANYSECVKFLTNETREREVFDRLGMIYT-VGYSVSLASLTVAVLILAYFRRLHCT 218

Qy        150 RNIIHWNLITTFILRNIMWFLLQMIDHN---IHESNEV---------------------- 184
              || || :|  :|:|| :  |:   : ::    : |:  :
Db        219 RNYIHMHLFLSFMLRAVSIFVKDAVLYSGATLDEAERLTEEELRAIAQAPPPPATAAAGY 278

Qy        185 -WCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIPSPIIVT 243
               ||   | : ||: ||::|: ||| |||: | | : ::|   | |   || :|:  :
Db        279 AGCRVAVTFFLYFLATNYYWILVEGLYLHSLIFMAFFSEKKYLWGFTVFGWGLPAVFVAV 338

Qy        244 WAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLR---AST 300
              |   :    | ||       |   :| |  ::  :::||:   ||||:| ||||    |
Db        339 WVSVRATLANTGCWDLSSGNK--KWIIQVPILASIVLNFILFINIVRVLATKLRETNAGR 396

Qy        301 TSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQI--VFIYFNSFLQSFQGFFVS 358
                |||| :|:||||:|| |: |::|    |  :    :  | :::     |||||||:
Db        397 CDTRQQYRKLLKSTLVLMPLFGVHYIVFMATPYTEVSGTLWQVQMHYEMLFNSFQGFFVA 456

Qy        359 VFYCFLNGEVRSAARKRWHRW 379
              : ||| ||||::  :| | ||
Db        457 IIYCFCNGEVQAEIKKSWSRW 477


RESULT 15
I37217
calcitonin receptor - human
C;Species: Homo sapiens (man)
C;Date: 12-Aug-1996 #sequence_revision 12-Aug-1996 #text_change 21-Jul-2000
C;Accession: I37217; S43673; S44209
R;Kuestner, R.E.; Elrod, R.D.; Grant, F.J.; Hagen, F.S.; Kuijper, J.L.; Matthewes, S.L.;
n, P.M.; Moore, E.E.
Mol. Pharmacol. 46, 246-255, 1994
```

```
A;Title: Cloning and characterization of an abundant subtype of the human calcitonin rec
A;Reference number: I37217; MUID:94359487; PMID:8078488
A;Accession: I37217
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-474 <RES>
A;Cross-references: EMBL:X69920; NID:g474931; PIDN:CAA49541.1; PID:g474932
R;Frendo, J.L.; Pichaud, F.; DeLage Mourroux, R.; Bouizar, Z.; Segond, N.; Moukhtar, M.S
FEBS Lett. 342, 214-216, 1994
A;Title: An isoform of the human calcitonin receptor is expressed in TT cells and in med
A;Reference number: S43673; MUID:94192834; PMID:8143880
A;Accession: S43673
A;Molecule type: mRNA
A;Residues: 121-168,'X',170-199,'X',201-216 <FRE>
C;Genetics:
A;Gene: GDB:CALCR
A;Cross-references: GDB:138127; OMIM:114131
A;Map position: 7q21.3-7q21.3
C;Superfamily: glucagon receptor
C;Keywords: transmembrane protein

  Query Match             26.3%;  Score 587;  DB 2;  Length 474;
  Best Local Similarity   34.3%;  Pred. No. 1.4e-41;
  Matches  137;  Conservative   73;  Mismatches  151;  Indels   38;  Gaps   14;

Qy          19 LLDAFQDSFLHSESSSFFGFEGPYCSATIDQIGTCWPRSLAGELVERPCPDSFNGIRYNT 78
               ::||    :   :    :  |||||: | |    ||  : || |  : ||| |    ::
Db          48 MMDAQYKCYDRMQQLPAYQGEGPYCNRTWDG-WLCWDDTPAGVLSYQFCPDYFPD--FDP 104

Qy          79 TRNVYRECFENGTW-------ASWMNYSQCVPILDNKRK--YALHYKIALIINYLGHCIS 129
               :  | : | | | |         :| ||: |       | |  | |:| :|::    || :|
Db         105 SEKVTKYCDEKGVWFKHPENNRTWSNYTMCNAFTPEKLKNAYVLYY-LAIV----GHSLS 159

Qy         130 ILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMID----HNIHESNEVW 185
               |  |||:  :|:  ||: | |  :| |:  |:|| | |  :: :::      :   : |
Db         160 IFTLVISLGIFVFFRSLGCQRVTLHKNMFLTYIL-NSMIIIIHLVEVVPNGELVRRDPVS 218

Qy         186 CRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLR-KWVFLFIGWCIPSPIIVTW 244
               |: :   : | :  |:|||  || |||| ||:   |:| | :| :| :||  |
Db         219 CKILHFFHQYMMACNYFWMLCEGIYLHTLIVVAVFTEKQRLRWYYL-LGWGFPLVPTTIH 277

Qy         245 AICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLRASTTSET 304
               || :  | |: ||:  |   :: ||  | |:  |::|| || ||||:|:||:| :  :|:
Db         278 AITRAVYFNDNCWLSVE--THLLYIIHGPVMAALVVNFFFLLNIVRVLVTKMRETHEAES 335

Qy         305 IQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFVSVFYCFL 364
               | ||||||::|:|||| :::|   |    : :| : |    |  ||||||:  |||
Db         336 HMYLKAVKATMILVPLLGIQFVVFPWRPSNKMLGKI-YDYVMHSLIHFQGFFVATIYCFC 394

Qy         365 NGEVRSAARKRW--------HRW---QDHHSLRVRVARA 392
               | ||::  :::|         ||     : | |   | |
Db         395 NNEVQTTVKRQWAQFKIQWNQRWGRRPSNRSARAAAAAA 433


Search completed: August 20, 2005, 00:29:10
Job time : 41 secs
```

GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: August 20, 2005, 00:28:34 ; Search time 163 Seconds
(without alignments)
992.178 Million cell updates/sec

Title: US-10-649-852-32
Perfect score: 2229
Sequence: 1 MDSTIFEIIIDEFDANCSLL.....SIPTSPTRISFHSIKQTAAV 413

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1759131 seqs, 391586102 residues

Total number of hits satisfying chosen parameters: 1759131

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published_Applications_AA:*
1: /cgn2_6/ptodata/2/pubpaa/US07_PUBCOMB.pep:*
2: /cgn2_6/ptodata/2/pubpaa/PCT_NEW_PUB.pep:*
3: /cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep:*
4: /cgn2_6/ptodata/2/pubpaa/US06_PUBCOMB.pep:*
5: /cgn2_6/ptodata/2/pubpaa/US07_NEW_PUB.pep:*
6: /cgn2_6/ptodata/2/pubpaa/PCTUS_PUBCOMB.pep:*
7: /cgn2_6/ptodata/2/pubpaa/US08_NEW_PUB.pep:*
8: /cgn2_6/ptodata/2/pubpaa/US08_PUBCOMB.pep:*
9: /cgn2_6/ptodata/2/pubpaa/US09A_PUBCOMB.pep:*
10: /cgn2_6/ptodata/2/pubpaa/US09B_PUBCOMB.pep:*
11: /cgn2_6/ptodata/2/pubpaa/US09C_PUBCOMB.pep:*
12: /cgn2_6/ptodata/2/pubpaa/US09_NEW_PUB.pep:*
13: /cgn2_6/ptodata/2/pubpaa/US10A_PUBCOMB.pep:*
14: /cgn2_6/ptodata/2/pubpaa/US10B_PUBCOMB.pep:*
15: /cgn2_6/ptodata/2/pubpaa/US10C_PUBCOMB.pep:*
16: /cgn2_6/ptodata/2/pubpaa/US10D_PUBCOMB.pep:*
17: /cgn2_6/ptodata/2/pubpaa/US10E_PUBCOMB.pep:*
18: /cgn2_6/ptodata/2/pubpaa/US10_NEW_PUB.pep:*
19: /cgn2_6/ptodata/2/pubpaa/US11A_PUBCOMB.pep:*
20: /cgn2_6/ptodata/2/pubpaa/US11_NEW_PUB.pep:*
21: /cgn2_6/ptodata/2/pubpaa/US60_NEW_PUB.pep:*
22: /cgn2_6/ptodata/2/pubpaa/US60_PUBCOMB.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	2229	100.0	413	10	US-09-799-978-32	Sequence 32, Appl
2	2229	100.0	413	16	US-10-649-852-32	Sequence 32, Appl
3	1807	81.1	405	10	US-09-799-978-38	Sequence 38, Appl
4	1807	81.1	405	16	US-10-649-852-38	Sequence 38, Appl
5	1804	80.9	411	15	US-10-292-798-636	Sequence 636, App
6	1799	80.7	411	9	US-09-881-401-8	Sequence 8, Appli
7	1799	80.7	411	10	US-09-799-978-10	Sequence 10, Appl
8	1799	80.7	411	14	US-10-225-567A-96	Sequence 96, Appl
9	1799	80.7	411	16	US-10-649-852-10	Sequence 10, Appl
10	1799	80.7	411	16	US-10-821-502-8	Sequence 8, Appli
11	1799	80.7	411	16	US-10-757-262-120	Sequence 120, App
12	1793	80.4	411	9	US-09-881-401-4	Sequence 4, Appli
13	1793	80.4	411	10	US-09-818-009-12	GENERAL INFORMA
14	1793	80.4	411	10	US-09-799-978-18	Sequence 18, Appl
15	1793	80.4	411	16	US-10-649-852-18	Sequence 18, Appl
16	1793	80.4	411	16	US-10-821-502-4	Sequence 4, Appli
17	1787.5	80.2	397	10	US-09-799-978-14	Sequence 14, Appl
18	1787.5	80.2	397	16	US-10-649-852-14	Sequence 14, Appl
19	1786	80.1	438	10	US-09-799-978-12	Sequence 12, Appl
20	1786	80.1	438	16	US-10-649-852-12	Sequence 12, Appl
21	1786	80.1	438	17	US-10-482-029-178	Sequence 178, App
22	1784.5	80.1	431	9	US-09-881-401-2	Sequence 2, Appli
23	1784.5	80.1	431	10	US-09-818-009-13	GENERAL INFORMA
24	1784.5	80.1	431	16	US-10-821-502-2	Sequence 2, Appli
25	1776.5	79.7	431	10	US-09-799-978-20	Sequence 20, Appl
26	1776.5	79.7	431	16	US-10-649-852-20	Sequence 20, Appl
27	1770.5	79.4	431	9	US-09-191-724-10	Sequence 10, Appl
28	1770.5	79.4	431	10	US-09-818-009-11	GENERAL INFORMA
29	1770.5	79.4	431	10	US-09-799-978-24	Sequence 24, Appl
30	1770.5	79.4	431	15	US-10-649-193-10	Sequence 10, Appl
31	1770.5	79.4	431	16	US-10-649-852-24	Sequence 24, Appl
32	1769	79.4	430	9	US-09-853-386-140	Sequence 140, App
33	1769	79.4	430	10	US-09-799-978-26	Sequence 26, Appl
34	1769	79.4	430	16	US-10-649-852-26	Sequence 26, Appl
35	1582.5	71.0	428	10	US-09-799-978-36	Sequence 36, Appl
36	1582.5	71.0	428	16	US-10-649-852-36	Sequence 36, Appl
37	1582	71.0	420	9	US-09-853-386-129	Sequence 129, App
38	1582	71.0	420	10	US-09-799-978-42	Sequence 42, Appl
39	1582	71.0	420	16	US-10-649-852-42	Sequence 42, Appl
40	1578.5	70.8	445	10	US-09-799-978-34	Sequence 34, Appl
41	1578.5	70.8	445	16	US-10-649-852-34	Sequence 34, Appl
42	1566	70.3	415	9	US-09-191-724-2	Sequence 2, Appli
43	1566	70.3	415	10	US-09-799-978-2	Sequence 2, Appli
44	1566	70.3	415	10	US-09-799-978-4	Sequence 4, Appli
45	1566	70.3	415	14	US-10-242-822B-1	Sequence 1, Appli

ALIGNMENTS

RESULT 1
US-09-799-978-32
; Sequence 32, Application US/09799978
; Publication No. US20030165807A1
; GENERAL INFORMATION:
; APPLICANT: The Procter & Gamble Company
; APPLICANT: Isfort, Robert
; APPLICANT: Sheldon, Russell
; TITLE OF INVENTION: Methods for Identifying Compounds for Regulating Muscle Mass o
; TITLE OF INVENTION: Function Using Corticotropin Releasing Factor Receptors
; FILE REFERENCE: 8448
; CURRENT APPLICATION NUMBER: US/09/799,978
; CURRENT FILING DATE: 2001-03-06
; NUMBER OF SEQ ID NOS: 44
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 32
; LENGTH: 413
; TYPE: PRT
; ORGANISM: Xenopus laevis
US-09-799-978-32

Query Match 100.0%; Score 2229; DB 10; Length 413;
Best Local Similarity 100.0%; Pred. No. 5.3e-199;
Matches 413; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGPYCSATIDQIGTCWPRSLAG 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGPYCSATIDQIGTCWPRSLAG 60

Qy         61 ELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNKRKYALHYKIALI 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 ELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNKRKYALHYKIALI 120

Qy        121 INYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHNIHE 180
```

```
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 INYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHNIHE 180

Qy        181 SNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIPSPI 240
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIPSPI 240

Qy        241 IVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLRAST 300
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 IVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLRAST 300

Qy        301 TSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFVSVF 360
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFVSVF 360

Qy        361 YCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
                |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 YCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413


RESULT 2
US-10-649-852-32
; Sequence 32, Application US/10649852
; Publication No. US20040101911A1
; GENERAL INFORMATION:
;  APPLICANT: The Procter & Gamble Company
;  APPLICANT:  Isfort, Robert
;  APPLICANT:  Sheldon, Russell
;  TITLE OF INVENTION: Methods for Identifying Compounds for Regulating Muscle Mass or F
;  TITLE OF INVENTION:  Using Corticotropin Releasing Factor Receptors
;  FILE REFERENCE: 8448R
;  CURRENT APPLICATION NUMBER: US/10/649,852
;  CURRENT FILING DATE:  2003-08-27
;  PRIOR APPLICATION NUMBER: US 09/799,978
;  PRIOR FILING DATE: 2001-03-06
;  NUMBER OF SEQ ID NOS: 44
;  SOFTWARE: PatentIn version 3.0
; SEQ ID NO 32
;   LENGTH: 413
;   TYPE: PRT
;   ORGANISM: Xenopus laevis
US-10-649-852-32

  Query Match             100.0%;  Score 2229;  DB 16;  Length 413;
  Best Local Similarity   100.0%;  Pred. No. 5.3e-199;
  Matches  413;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGPYCSATIDQIGTCWPRSLAG 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGPYCSATIDQIGTCWPRSLAG 60

Qy         61 ELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNKRKYALHYKIALI 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 ELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNKRKYALHYKIALI 120

Qy        121 INYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHNIHE 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 INYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHNIHE 180

Qy        181 SNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIPSPI 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIPSPI 240

Qy        241 IVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLRAST 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 IVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLRAST 300

Qy        301 TSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFVSVF 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFVSVF 360

Qy        361 YCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 YCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413


RESULT 3
US-09-799-978-38
; Sequence 38, Application US/09799978
; Publication No. US20030165807A1
; GENERAL INFORMATION:
;  APPLICANT:  The Procter & Gamble Company
;  APPLICANT:  Isfort, Robert
;  APPLICANT:  Sheldon, Russell
;  TITLE OF INVENTION:  Methods for Identifying Compounds for Regulating Muscle Mass or
;  TITLE OF INVENTION:  Function Using Corticotropin Releasing Factor Receptors
;  FILE REFERENCE:  8448
;  CURRENT APPLICATION NUMBER: US/09/799,978
;  CURRENT FILING DATE:  2001-03-06
;  NUMBER OF SEQ ID NOS:  44
;  SOFTWARE:  PatentIn version 3.0
; SEQ ID NO 38
;   LENGTH: 405
;   TYPE: PRT
;   ORGANISM: Ameiurus nebulosus
US-09-799-978-38

  Query Match             81.1%;  Score 1807;  DB 10;  Length 405;
  Best Local Similarity   79.9%;  Pred. No. 1.1e-159;
  Matches  330;  Conservative   33;  Mismatches   42;  Indels    8;  Gaps    2;

Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGPYCSATIDQIGTCWPRSLAG 60
              |: :: |::    : |||| ||| |    : | :       ||:|| |:||||||| ||
Db          1 MEVSLLELL--SVEVNCSLADAFGDPAYGNASDAL------YCNATADEIGTCWPRSGAG 52

Qy         61 ELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNKRKYALHYKIALI 120
               :| |||||  ||::||:||: |||| ||||||  :||| | |||: |||| :|||||||
Db         53 RVVARPCPDFINGVKYNSTRSAYRECLENGTWAFKINYSSCEPILEEKRKYPVHYKIALI 112

Qy        121 INYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHNIHE 180
              |||||||||: ||||||:||||||||||||:|||||||||||||||| |||:|||||||
Db        113 INYLGHCISVGALVIAFVLFLCLRSIRCLRNVIHWNLITTFILRNIMWLLLQLIDHNIHE 172

Qy        181 SNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIPCPV 232
               || ||| |||:|||||||||||||||||||||||||||||||||||||||||||| |:
Db        173 RNEPWCRLITTVYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIPCPV 232

Qy        241 IVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLRAST 300
              |: ||: ||: |||||| |||||||:|||||| ||:|||||||||||||||||||||||
Db        233 IIAWAVGKLYNENEQCWFGKEPGKYVDYIYQGPVIVVLLINFVFLFNIVRILMTKLRAST 292

Qy        301 TSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFVSVF 360
              ||||||||||||||||||||||||||||||||:||:|||||||||||||||||||||||||
Db        293 TSETIQYRKAVKATLVLLPLLGITYMLFFVNPGDDDISQIVFIYFNSFLQSFQGFFVSVF 352

Qy        361 YCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||||||| |||||||||:|:|||||||||||||||||||||| | ||
Db        353 YCFLNGEVRSAVRKRWHRWQDNHALRVRVARAMSIPTSPTRISFHSIKHTTAV 405


RESULT 4
US-10-649-852-38
; Sequence 38, Application US/10649852
; Publication No. US20040101911A1
; GENERAL INFORMATION:
;  APPLICANT: The Procter & Gamble Company
;  APPLICANT:  Isfort, Robert
;  APPLICANT:  Sheldon, Russell
;  TITLE OF INVENTION: Methods for Identifying Compounds for Regulating Muscle Mass or F
;  TITLE OF INVENTION:  Using Corticotropin Releasing Factor Receptors
;  FILE REFERENCE: 8448R
;  CURRENT APPLICATION NUMBER: US/10/649,852
;  CURRENT FILING DATE:  2003-08-27
;  PRIOR APPLICATION NUMBER: US 09/799,978
;  PRIOR FILING DATE: 2001-03-06
;  NUMBER OF SEQ ID NOS: 44
```

```
;  SOFTWARE: PatentIn version 3.0
; SEQ ID NO 38
;   LENGTH: 405
;   TYPE: PRT
;   ORGANISM: Ameiurus nebulosus
US-10-649-852-38

  Query Match             81.1%;  Score 1807;  DB 16;  Length 405;
  Best Local Similarity   79.9%;  Pred. No. 1.1e-159;
  Matches  330;  Conservative   33;  Mismatches   42;  Indels    8;  Gaps    2;

Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGPYCSATIDQIGTCWPRSLAG 60
              |: :: |::    : |||| ||| |    : | :       ||:|| |:|||||||| ||
Db          1 MEVSLLELL--SVEVNCSLADAFGDPAYGNASDAL------YCNATADEIGTCWPRSGAG 52

Qy         61 ELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNKRKYALHYKIALI 120
               :| |||||  ||::||:||: |||| ||||||  :||| | |||: |||| :|||||||
Db         53 RVVARPCPDFINGVKYNSTRSAYRECLENGTWAFKINYSSCEPILEEKRKYPVHYKIALI 112

Qy        121 INYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHNIHE 180
              |||||||||: ||||||:|||||||||||||:|||||||||||||||| |||:|||||||
Db        113 INYLGHCISVGALVIAFVLFLCLRSIRCLRNVIHWNLITTFILRNIMWLLLQLIDHNIHE 172

Qy        181 SNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIPSPI 240
               || ||| |||:|||||||||||||||||||||||||||||||||||||||||||||| |:
Db        173 RNEPWCRLITTVYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIPCPV 232

Qy        241 IVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLRAST 300
              |: ||: ||: |||||| |||||||:|||||| ||:|||||||||||||||||||||||
Db        233 IIAWAVGKLYNENEQCWFGKEPGKYVDYIYQGPVIVVLLINFVFLFNIVRILMTKLRAST 292

Qy        301 TSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFVSVF 360
              ||||||||||||||||||||||||||||||:||:|||||||||||||||||||||||||
Db        293 TSETIQYRKAVKATLVLLPLLGITYMLFFVNPGDDDISQIVFIYFNSFLQSFQGFFVSVF 352

Qy        361 YCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||||||||| |||||||||:|:|||||||||||||||||||||| | ||
Db        353 YCFLNGEVRSAVRKRWHRWQDNHALRVRVARAMSIPTSPTRISFHSIKHTTAV 405


RESULT 5
US-10-292-798-636
; Sequence 636, Application US/10292798
; Publication No. US20030235833A1
; GENERAL INFORMATION:
;  APPLICANT: SUWA, MAKIKO
;  APPLICANT:  ASAI, KIYOSHI
;  APPLICANT:  AKIYAMA, YUTAKA
;  APPLICANT:  ABURATANI, HIROYUKI
;  TITLE OF INVENTION: GUANOSINE TRIPHOSPHATE-BINDING PROTEIN COUPLED RECEPTORS
;  FILE REFERENCE: 084335/166
;  CURRENT APPLICATION NUMBER: US/10/292,798
;  CURRENT FILING DATE:  2002-11-13
;  PRIOR APPLICATION NUMBER: 10/017,161
;  PRIOR FILING DATE: 2001-12-18
;  PRIOR APPLICATION NUMBER: JP 2001-246789
;  PRIOR FILING DATE: 2001-06-18
;  NUMBER OF SEQ ID NOS: 2070
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 636
;   LENGTH: 411
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-292-798-636

  Query Match             80.9%;  Score 1804;  DB 15;  Length 411;
  Best Local Similarity   80.0%;  Pred. No. 2.1e-159;
  Matches  333;  Conservative   33;  Mismatches   42;  Indels    8;  Gaps    4;

Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGP--YCSATIDQIGTCWPRSL 58
              ||: :   ::   :|||||  |  : |           |||  ||: |:||||||||||
Db          1 MDAALLHSLL---EANCSL--ALAEELLLDGWGPPLDPEGPYSYCNTTLDQIGTCWPRSA 55

Qy         59 AGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNK-RKYALHYKI 117
              || |||||||: |||::|||||| |||| ||||||| :|||||  ||||:| |||  |||:|
Db         56 AGALVERPCPEYFNGVKYNTTRNAYRECLENGTWASKINYSQCEPILDDKQRKYDLHYRI 115

Qy        118 ALIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHN 177
              ||::||||||:|: |||  |||||| |||||||||:|||||||||||||:||||||::||
Db        116 ALVVNYLGHCVSVAALVAAFLLFLALRSIRCLRNVIHWNLITTFILRNVMWFLLQLVDHE 175

Qy        178 IHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIP 237
              :|||||||||||||:|||||||||||||||||||||||||||||||::|||| :|||||||||
Db        176 VHESNEVWCRCITTIFNYFVVTNFFWMFVEGCYLHTAIVMTYSTERLRKCLFLFIGWCIP 235

Qy        238 SPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLR 297
               |||| ||| ||:|||||| |||||  :|||||| :|||||||||||||||||||||||
Db        236 FPIIVAWAIGKLYYENEQCWFGKEPGDLVDYIYQGPIILVLLINFVFLFNIVRILMTKLR 295

Qy        298 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFV 357
              |||||||||||||||||||||||||||||||||||||||||||:|||:|||||||||||||
Db        296 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDLSQIMFIYFNSFLQSFQGFFV 355

Qy        358 SVFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||| ||||||| |||||||||||||| :|||||||||||||||||||||||||
Db        356 SVFYCFFNGEVRSAVRKRWHRWQDHHSLRVPMARAMSIPTSPTRISFHSIKQTAAV 411


RESULT 6
US-09-881-401-8
; Sequence 8, Application US/09881401
; Patent No. US20020077468A1
;  GENERAL INFORMATION:
;       APPLICANT: Lovenberg, Timothy W.
;                  Oltersdorf, Tilman
;                  Liaw, Chen
;                  Grigoriadis, Dimitri E.
;                  Chalmers, Derek T.
;                  DeSouza, Errol B.
;       TITLE OF INVENTION: CORTICOTROPIN RELEASING FACTOR 2
;                           RECEPTORS
;       NUMBER OF SEQUENCES: 8
;       CORRESPONDENCE ADDRESS:
;            ADDRESSEE: Seed Intellectual Property Law Group
;            STREET: 701 Fifth Avenue, Suite 6300
;            CITY: Seattle
;            STATE: Washington
;            COUNTRY: USA
;            ZIP: 98104-7092
;       COMPUTER READABLE FORM:
;            MEDIUM TYPE: Floppy disk
;            COMPUTER: IBM PC compatible
;            OPERATING SYSTEM: PC-DOS/MS-DOS
;            SOFTWARE: PatentIn Release #1.0, Version #1.25
;       CURRENT APPLICATION DATA:
;            APPLICATION NUMBER: US/09/881,401
;            FILING DATE: 13-Jun-2001
;            CLASSIFICATION: <Unknown>
;       ATTORNEY/AGENT INFORMATION:
;            NAME: Christiansen, William T.
;            REGISTRATION NUMBER: 44,614
;            REFERENCE/DOCKET NUMBER: 690068.401C4
;       TELECOMMUNICATION INFORMATION:
;            TELEPHONE: (206) 622-4900
;            TELEFAX: (206) 682-6031
;  INFORMATION FOR SEQ ID NO: 8:
;       SEQUENCE CHARACTERISTICS:
;            LENGTH: 411 amino acids
;            TYPE: amino acid
;            TOPOLOGY: linear
;       MOLECULE TYPE: protein
;       SEQUENCE DESCRIPTION: SEQ ID NO: 8:
US-09-881-401-8

  Query Match             80.7%;  Score 1799;  DB 9;  Length 411;
  Best Local Similarity   79.8%;  Pred. No. 6.2e-159;
```

```
  Matches  332;  Conservative   33;  Mismatches   43;  Indels    8;  Gaps    4;

Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGP--YCSATIDQIGTCWPRSL 58
              ||: :   ::   :|||||  |  :  |          |||  ||: |:||||||||||
Db          1 MDAALLHSLL---EANCSL--ALAEELLLDGWGPPLDPEGPYSYCNTTLDQIGTCWPRSA 55

Qy         59 AGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNK-RKYALHYKI 117
              || |||||||: |||::|||||| |||| ||||||| :|||| ||||:| ||| |||:|
Db         56 AGALVERPCPEYFNGVKYNTTRNAYRECLENGTWASKINYSQCEPILDDKQRKYDLHYRI 115

Qy        118 ALIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHN 177
              ||::||||||:|: ||| |||||| |||||||||:|||||||||||||:||||||::||
Db        116 ALVVNYLGHCVSVAALVAAFLLFLALRSIRCLRNVIHWNLITTFILRNVMWFLLQLVDHE 175

Qy        178 IHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIP 237
              :|||||||| |||||:|||||||||||||||||||||||||||::||| :|||||||||
Db        176 VHESNEVWCHCITTIFNYFVVTNFFWMFVEGCYLHTAIVMTYSTERLRKCLFLFIGWCIP 235

Qy        238 SPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLR 297
              |||| ||| ||:||||||| |||||  :|||||| :|||||||||||||||||||||||
Db        236 FPIIVAWAIGKLYYENEQCWFGKEPGDLVDYIYQGPIILVLLINFVFLFNIVRILMTKLR 295

Qy        298 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFV 357
              |||||||||||||||||||||||||||||||||||||||||||:|||:|||||||||||||
Db        296 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDLSQIMFIYFNSFLQSFQGFFV 355

Qy        358 SVFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||| ||||||| |||||||||||||| :|||||||||||||||||||||||||
Db        356 SVFYCFFNGEVRSAVRKRWHRWQDHHSLRVPMARAMSIPTSPTRISFHSIKQTAAV 411


RESULT 7
US-09-799-978-10
; Sequence 10, Application US/09799978
; Publication No. US20030165807A1
; GENERAL INFORMATION:
;  APPLICANT:  The Procter & Gamble Company
;  APPLICANT:  Isfort, Robert
;  APPLICANT:  Sheldon, Russell
;  TITLE OF INVENTION:   Methods for Identifying Compounds for Regulating Muscle Mass or
;  TITLE OF INVENTION:  Function Using Corticotropin Releasing Factor Receptors
;  FILE REFERENCE:   8448
;  CURRENT APPLICATION NUMBER: US/09/799,978
;  CURRENT FILING DATE:  2001-03-06
;  NUMBER OF SEQ ID NOS:   44
;  SOFTWARE:   PatentIn version 3.0
; SEQ ID NO 10
;   LENGTH: 411
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-799-978-10

  Query Match             80.7%;  Score 1799;  DB 10;  Length 411;
  Best Local Similarity   79.8%;  Pred. No. 6.2e-159;
  Matches  332;  Conservative   33;  Mismatches   43;  Indels    8;  Gaps    4;

Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGP--YCSATIDQIGTCWPRSL 58
              ||: :   ::   :|||||  |  :  |          |||  ||: |:||||||||||
Db          1 MDAALLHSLL---EANCSL--ALAEELLLDGWGPPLDPEGPYSYCNTTLDQIGTCWPRSA 55

Qy         59 AGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNK-RKYALHYKI 117
              || |||||||: |||::|||||| |||| ||||||| :|||| ||||:| ||| |||:|
Db         56 AGALVERPCPEYFNGVKYNTTRNAYRECLENGTWASKINYSQCEPILDDKQRKYDLHYRI 115

Qy        118 ALIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHN 177
              ||::||||||:|: ||| |||||| |||||||||:|||||||||||||:||||||::||
Db        116 ALVVNYLGHCVSVAALVAAFLLFLALRSIRCLRNVIHWNLITTFILRNVMWFLLQLVDHE 175

Qy        178 IHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIP 237
              :|||||||| |||||:|||||||||||||||||||||||||||::||| :|||||||||
Db        176 VHESNEVWCHCITTIFNYFVVTNFFWMFVEGCYLHTAIVMTYSTERLRKCLFLFIGWCIP 235

Qy        238 SPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLR 297
              |||| ||| ||:||||||| |||||  :|||||| :|||||||||||||||||||||||
Db        236 FPIIVAWAIGKLYYENEQCWFGKEPGDLVDYIYQGPIILVLLINFVFLFNIVRILMTKLR 295

Qy        298 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFV 357
              |||||||||||||||||||||||||||||||||||||||||||:|||:|||||||||||||
Db        296 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDLSQIMFIYFNSFLQSFQGFFV 355

Qy        358 SVFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||| ||||||| |||||||||||||| :|||||||||||||||||||||||||
Db        356 SVFYCFFNGEVRSAVRKRWHRWQDHHSLRVPMARAMSIPTSPTRISFHSIKQTAAV 411


RESULT 8
US-10-225-567A-96
; Sequence 96, Application US/10225567A
; Publication No. US20030113798A1
; GENERAL INFORMATION:
;  APPLICANT: LifeSpan Biosciences
;  APPLICANT:  Brown, Joseph P.
;  APPLICANT:  Burmer, Glenna C.
;  APPLICANT:  Roush, Christine L.
;  TITLE OF INVENTION: ANTIGENIC PEPTIDES AND ANTIBODIES FOR G PROTEIN-COUPLED RECEPTORS
;  FILE REFERENCE: 1920-4-4
;  CURRENT APPLICATION NUMBER: US/10/225,567A
;  CURRENT FILING DATE:  2001-12-19
;  PRIOR APPLICATION NUMBER: 60/257,144
;  PRIOR FILING DATE: 2000-12-19
;  NUMBER OF SEQ ID NOS: 2292
;  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 96
;   LENGTH: 411
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-225-567A-96

  Query Match             80.7%;  Score 1799;  DB 14;  Length 411;
  Best Local Similarity   79.8%;  Pred. No. 6.2e-159;
  Matches  332;  Conservative   33;  Mismatches   43;  Indels    8;  Gaps    4;

Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGP--YCSATIDQIGTCWPRSL 58
              ||: :   ::   :|||||  |  :  |          |||  ||: |:||||||||||
Db          1 MDAALLHSLL---EANCSL--ALAEELLLDGWGPPLDPEGPYSYCNTTLDQIGTCWPRSA 55

Qy         59 AGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNK-RKYALHYKI 117
              || |||||||: |||::|||||| |||| ||||||| :|||| ||||:| ||| |||:|
Db         56 AGALVERPCPEYFNGVKYNTTRNAYRECLENGTWASKINYSQCEPILDDKQRKYDLHYRI 115

Qy        118 ALIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHN 177
              ||::||||||:|: ||| |||||| |||||||||:|||||||||||||:||||||::||
Db        116 ALVVNYLGHCVSVAALVAAFLLFLALRSIRCLRNVIHWNLITTFILRNVMWFLLQLVDHE 175

Qy        178 IHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIP 237
              :|||||||| |||||:|||||||||||||||||||||||||||::||| :|||||||||
Db        176 VHESNEVWCHCITTIFNYFVVTNFFWMFVEGCYLHTAIVMTYSTERLRKCLFLFIGWCIP 235

Qy        238 SPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLR 297
              |||| ||| ||:||||||| |||||  :|||||| :|||||||||||||||||||||||
Db        236 FPIIVAWAIGKLYYENEQCWFGKEPGDLVDYIYQGPIILVLLINFVFLFNIVRILMTKLR 295

Qy        298 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFV 357
              |||||||||||||||||||||||||||||||||||||||||||:|||:|||||||||||||
Db        296 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDLSQIMFIYFNSFLQSFQGFFV 355

Qy        358 SVFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||| ||||||| |||||||||||||| :|||||||||||||||||||||||||
Db        356 SVFYCFFNGEVRSAVRKRWHRWQDHHSLRVPMARAMSIPTSPTRISFHSIKQTAAV 411


RESULT 9
US-10-649-852-10
; Sequence 10, Application US/10649852
; Publication No. US20040101911A1
; GENERAL INFORMATION:
```

```
;  APPLICANT: The Procter & Gamble Company
;  APPLICANT:  Isfort, Robert
;  APPLICANT:  Sheldon, Russell
;  TITLE OF INVENTION: Methods for Identifying Compounds for Regulating Muscle Mass or R
;  TITLE OF INVENTION:  Using Corticotropin Releasing Factor Receptors
;  FILE REFERENCE: 8448R
;  CURRENT APPLICATION NUMBER: US/10/649,852
;  CURRENT FILING DATE:  2003-08-27
;  PRIOR APPLICATION NUMBER: US 09/799,978
;  PRIOR FILING DATE: 2001-03-06
;  NUMBER OF SEQ ID NOS: 44
;  SOFTWARE: PatentIn version 3.0
; SEQ ID NO 10
;   LENGTH: 411
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-649-852-10

  Query Match             80.7%;  Score 1799;  DB 16;  Length 411;
  Best Local Similarity   79.8%;  Pred. No. 6.2e-159;
  Matches  332;  Conservative   33;  Mismatches   43;  Indels    8;  Gaps    4;

Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGP--YCSATIDQIGTCWPRSL 58
              ||: :   ::   :|||||  |  :  |           |||  ||: |:||||||||||
Db          1 MDAALLHSLL---EANCSL--ALAEELLLDGWGPPLDPEGPYSYCNTTLDQIGTCWPRSA 55

Qy         59 AGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNK-RKYALHYKI 117
              || |||||||: |||::|||||| |||| ||||||| :|||| |||:| ||| |||:|
Db         56 AGALVERPCPEYFNGVKYNTTRNAYRECLENGTWASKINYSQCEPILDDKQRKYDLHYRI 115

Qy        118 ALIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHN 177
              ||::||||||:|: ||| |||||| |||||||||:|||||||||||||:||||||::||
Db        116 ALVVNYLGHCVSVAALVAAFLLFLALRSIRCLRNVIHWNLITTFILRNVMWFLLQLVDHE 175

Qy        178 IHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIP 237
              :|||||||| |||||:|||||||||||||||||||||||||::||| :|||||||||
Db        176 VHESNEVWCHCITTIFNYFVVTNFFWMFVEGCYLHTAIVMTYSTERLRKCLFLFIGWCIP 235

Qy        238 SPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLR 297
               |||| ||| ||:||||||| |||||  :|||||| :|||||||||||||||||||||
Db        236 FPIIVAWAIGKLYYENEQCWFGKEPGDLVDYIYQGPIILVLLINFVFLFNIVRILMTKLR 295

Qy        298 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFV 357
              ||||||||||||||||||||||||||||||||||||||||:|||:||||||||||||||
Db        296 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDLSQIMFIYFNSFLQSFQGFFV 355

Qy        358 SVFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||| ||||||| |||||||||||||| :|||||||||||||||||||||||
Db        356 SVFYCFFNGEVRSAVRKRWHRWQDHHSLRVPMARAMSIPTSPTRISFHSIKQTAAV 411


RESULT 10
US-10-821-502-8
; Sequence 8, Application US/10821502
; Publication No. US20040185533A1
;   GENERAL INFORMATION:
;        APPLICANT: Lovenberg, Timothy W.
;                   Oltersdorf, Tilman
;                   Liaw, Chen Wang
;                   Grigoriadis, Dimitri E.
;                   Chalmers, Derek T.
;                   DeSouza, Errol B.
;        TITLE OF INVENTION: CORTICOTROPIN RELEASING FACTOR 2
;                            RECEPTORS
;        NUMBER OF SEQUENCES: 8
;        CORRESPONDENCE ADDRESS:
;             ADDRESSEE: Seed Intellectual Property Law Group
;             STREET: 701 Fifth Avenue, Suite 6300
;             CITY: Seattle
;             STATE: Washington
;             COUNTRY: USA
;             ZIP: 98104-7092
;        COMPUTER READABLE FORM:
;             MEDIUM TYPE: Floppy disk
;             COMPUTER: IBM PC compatible
;             OPERATING SYSTEM: PC-DOS/MS-DOS
;             SOFTWARE: PatentIn Release #1.0, Version #1.25
;        CURRENT APPLICATION DATA:
;             APPLICATION NUMBER: US/10/821,502
;             FILING DATE: 09-Apr-2004
;             CLASSIFICATION: <Unknown>
;        ATTORNEY/AGENT INFORMATION:
;             NAME: Christiansen, William T.
;             REGISTRATION NUMBER: 44,614
;             REFERENCE/DOCKET NUMBER: 690068.401C5
;        TELECOMMUNICATION INFORMATION:
;             TELEPHONE: (206) 622-4900
;             TELEFAX: (206) 682-6031
;   INFORMATION FOR SEQ ID NO: 8:
;        SEQUENCE CHARACTERISTICS:
;             LENGTH: 411 amino acids
;             TYPE: amino acid
;             TOPOLOGY: linear
;        MOLECULE TYPE: protein
;        SEQUENCE DESCRIPTION: SEQ ID NO: 8:
US-10-821-502-8

  Query Match             80.7%;  Score 1799;  DB 16;  Length 411;
  Best Local Similarity   79.8%;  Pred. No. 6.2e-159;
  Matches  332;  Conservative   33;  Mismatches   43;  Indels    8;  Gaps    4;

Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGP--YCSATIDQIGTCWPRSL 58
              ||: :   ::   :|||||  |  :  |           |||  ||: |:||||||||||
Db          1 MDAALLHSLL---EANCSL--ALAEELLLDGWGPPLDPEGPYSYCNTTLDQIGTCWPRSA 55

Qy         59 AGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNK-RKYALHYKI 117
              || |||||||: |||::|||||| |||| ||||||| :|||| |||:| ||| |||:|
Db         56 AGALVERPCPEYFNGVKYNTTRNAYRECLENGTWASKINYSQCEPILDDKQRKYDLHYRI 115

Qy        118 ALIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHN 177
              ||::||||||:|: ||| |||||| |||||||||:|||||||||||||:||||||::||
Db        116 ALVVNYLGHCVSVAALVAAFLLFLALRSIRCLRNVIHWNLITTFILRNVMWFLLQLVDHE 175

Qy        178 IHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIP 237
              :|||||||| |||||:|||||||||||||||||||||||||::||| :|||||||||
Db        176 VHESNEVWCHCITTIFNYFVVTNFFWMFVEGCYLHTAIVMTYSTERLRKCLFLFIGWCIP 235

Qy        238 SPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLR 297
               |||| ||| ||:||||||| |||||  :|||||| :|||||||||||||||||||||
Db        236 FPIIVAWAIGKLYYENEQCWFGKEPGDLVDYIYQGPIILVLLINFVFLFNIVRILMTKLR 295

Qy        298 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFV 357
              ||||||||||||||||||||||||||||||||||||||||:|||:||||||||||||||
Db        296 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDLSQIMFIYFNSFLQSFQGFFV 355

Qy        358 SVFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||| ||||||| |||||||||||||| :|||||||||||||||||||||||
Db        356 SVFYCFFNGEVRSAVRKRWHRWQDHHSLRVPMARAMSIPTSPTRISFHSIKQTAAV 411


RESULT 11
US-10-757-262-120
; Sequence 120, Application US/10757262
; Publication No. US20040197825A1
; GENERAL INFORMATION:
;  APPLICANT: Karicheti, Venkateswarlu
;  APPLICANT:  Silos-Santiago, Inmaculada
;  APPLICANT:  Eliasof, Scott D.
;  TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR TREATING
;  TITLE OF INVENTION:  UROLOGICAL DISORDERS USING 44390, 54181, 211, 5687, 884,
;  TITLE OF INVENTION:  1405, 636, 4421, 5410, 30905, 2045, 16405, 18560, 2047,
;  TITLE OF INVENTION:  33751, 52872, 14063, 20739, 32544, 43239, 44373, 51164,
;  TITLE OF INVENTION:  53010, 16852, 1587, 2207, 22245, 2387, 52908, 69112, 14990,
;  TITLE OF INVENTION:  18547, 115, 579, 15985, 15625, 760, 18603, 2395, 2554, 8675,
;  TITLE OF INVENTION:  32720, 4809, 14303, 16816, 17827, 32620, 577, 619, 1423,
;  TITLE OF INVENTION:  2158, 8263, 15402, 16209, 16386, 21165, 30911, 41897, 1643,
```

```
;  TITLE OF INVENTION:  2543, 9626, 13231, 32409, 84260, 2882, 8203, 32678 OR
;  TITLE OF INVENTION:  55053
;  FILE REFERENCE: MPI03-007P1RNOMNIM
;  CURRENT APPLICATION NUMBER: US/10/757,262
;  CURRENT FILING DATE:  2004-01-14
;  PRIOR APPLICATION NUMBER: US 60/440,318
;  PRIOR FILING DATE: 2003-01-15
;  PRIOR APPLICATION NUMBER: US 60/444,783
;  PRIOR FILING DATE: 2003-02-04
;  PRIOR APPLICATION NUMBER: US 60/457,901
;  PRIOR FILING DATE: 2003-03-27
;  PRIOR APPLICATION NUMBER: US 60/468,775
;  PRIOR FILING DATE: 2003-05-08
;  PRIOR APPLICATION NUMBER: US 60/471,614
;  PRIOR FILING DATE: 2003-05-19
;  PRIOR APPLICATION NUMBER: US 60/478,742
;  PRIOR FILING DATE: 2003-06-16
;  PRIOR APPLICATION NUMBER: US 60/488,529
;  PRIOR FILING DATE: 2003-07-18
;  PRIOR APPLICATION NUMBER: US 60/491,156
;  PRIOR FILING DATE: 2003-07-30
;  PRIOR APPLICATION NUMBER: US 60/499,594
;  PRIOR FILING DATE: 2003-09-02
;  PRIOR APPLICATION NUMBER: US 60/506,332
;  PRIOR FILING DATE: 2003-09-26
;  NUMBER OF SEQ ID NOS: 136
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 120
;   LENGTH: 411
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-757-262-120

  Query Match             80.7%;  Score 1799;  DB 16;  Length 411;
  Best Local Similarity   79.8%;  Pred. No. 6.2e-159;
  Matches  332;  Conservative   33;  Mismatches   43;  Indels    8;  Gaps    4;

Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGP--YCSATIDQIGTCWPRSL 58
              ||: :   ::   :|||||  |  :  |          |||  ||: |:||||||||||
Db          1 MDAALLHSLL---EANCSL--ALAEELLLDGWGPPLDPEGPYSYCNTTLDQIGTCWPRSA 55

Qy         59 AGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNK-RKYALHYKI 117
              || |||||||: |||::|||||| |||| ||||||| :|||| ||||:| ||| |||:|
Db         56 AGALVERPCPEYFNGVKYNTTRNAYRECLENGTWASKINYSQCEPILDDKQRKYDLHYRI 115

Qy        118 ALIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHN 177
              ||::|||||:|: ||| |||||| |||||||:|||||||||||:||||||::||
Db        116 ALVVNYLGHCVSVAALVAAFLLFLALRSIRCLRNVIHWNLITTFILRNVMWFLLQLVDHE 175

Qy        178 IHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIP 237
              :|||||||| |||||:||||||||||||||||||||||||::||| :|||||||||
Db        176 VHESNEVWCHCITTIFNYFVVTNFFWMFVEGCYLHTAIVMTYSTERLRKCLFLFIGWCIP 235

Qy        238 SPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLR 297
              |||| ||| ||:|||||| |||||  :|||||| :|||||||||||||||||||||||
Db        236 FPIIVAWAIGKLYYENEQCWFGKEPGDLVDYIYQGPIILVLLINFVFLFNIVRILMTKLR 295

Qy        298 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFV 357
              |||||||||||||||||||||||||||||||||||||||:|||:|||||||||||||||
Db        296 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDLSQIMFIYFNSFLQSFQGFFV 355

Qy        358 SVFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||| ||||||| |||||||||||||| :|||||||||||||||||||||||||
Db        356 SVFYCFFNGEVRSAVRKRWHRWQDHHSLRVPMARAMSIPTSPTRISFHSIKQTAAV 411


RESULT 12
US-09-881-401-4
; Sequence 4, Application US/09881401
; Patent No. US20020077468A1
;   GENERAL INFORMATION:
;        APPLICANT: Lovenberg, Timothy W.
;                   Oltersdorf, Tilman
;                   Liaw, Chen
;                   Grigoriadis, Dimitri E.
;                   Chalmers, Derek T.
;                   DeSouza, Errol B.
;        TITLE OF INVENTION: CORTICOTROPIN RELEASING FACTOR 2
;                            RECEPTORS
;        NUMBER OF SEQUENCES: 8
;        CORRESPONDENCE ADDRESS:
;             ADDRESSEE: Seed Intellectual Property Law Group
;             STREET: 701 Fifth Avenue, Suite 6300
;             CITY: Seattle
;             STATE: Washington
;             COUNTRY: USA
;             ZIP: 98104-7092
;        COMPUTER READABLE FORM:
;             MEDIUM TYPE: Floppy disk
;             COMPUTER: IBM PC compatible
;             OPERATING SYSTEM: PC-DOS/MS-DOS
;             SOFTWARE: PatentIn Release #1.0, Version #1.25
;        CURRENT APPLICATION DATA:
;             APPLICATION NUMBER: US/09/881,401
;             FILING DATE: 13-Jun-2001
;             CLASSIFICATION: <Unknown>
;        ATTORNEY/AGENT INFORMATION:
;             NAME: Christiansen, William T.
;             REGISTRATION NUMBER: 44,614
;             REFERENCE/DOCKET NUMBER: 690068.401C4
;        TELECOMMUNICATION INFORMATION:
;             TELEPHONE: (206) 622-4900
;             TELEFAX: (206) 682-6031
;   INFORMATION FOR SEQ ID NO: 4:
;        SEQUENCE CHARACTERISTICS:
;             LENGTH: 411 amino acids
;             TYPE: amino acid
;             TOPOLOGY: linear
;        MOLECULE TYPE: protein
;        SEQUENCE DESCRIPTION: SEQ ID NO: 4:
US-09-881-401-4

  Query Match             80.4%;  Score 1793;  DB 9;  Length 411;
  Best Local Similarity   80.0%;  Pred. No. 2.3e-158;
  Matches  333;  Conservative   30;  Mismatches   45;  Indels    8;  Gaps    4;

Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGP--YCSATIDQIGTCWPRSL 58
              ||:    :::   :|||||  |  :  |          |||  ||: |:|||||||:|
Db          1 MDAA---LLLSLLEANCSL--ALAEELLLDGWGEPPDPEGPYSYCNTTLDQIGTCWPQSA 55

Qy         59 AGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNK-RKYALHYKI 117
              | |||||||: ||||:|||||| |||| ||||||| :||| | ||||:| ||| |||:|
Db         56 PGALVERPCPEYFNGIKYNTTRNAYRECLENGTWASRINYSHCEPILDDKQRKYDLHYRI 115

Qy        118 ALIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHN 177
              ||||||||||:|::||| |||||| |||||||||:||||||||||| |||||:|||
Db        116 ALIINYLGHCVSVVALVAAFLLFLVLRSIRCLRNVIHWNLITTFILRNITWFLLQLIDHE 175

Qy        178 IHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTEHLRKWLFLFIGWCIP 237
              :|| |||||||:|||:|||||||||||||||||||||||||||: ||||:|||||||||
Db        176 VHEGNEVWCRCVTTIFNYFVVTNFFWMFVEGCYLHTAIVMTYSTEHLRKWLFLFIGWCIP 235

Qy        238 SPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLR 297
              |||| ||: ||:||||||| |||||  :|||||| :|||||||||||||||||||||||
Db        236 CPIIVAWAVGKLYYENEQCWFGKEPGDLVDYIYQGPIILVLLINFVFLFNIVRILMTKLR 295

Qy        298 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFV 357
              |||||||||||||||||||||||||||||||||||||||:|||||||||||||||||||
Db        296 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDLSQIVFIYFNSFLQSFQGFFV 355

Qy        358 SVFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||| ||||||| |||||||||||:||| |||||||||||||||||||||||||
Db        356 SVFYCFFNGEVRSALRKRWHRWQDHHALRVPVARAMSIPTSPTRISFHSIKQTAAV 411


RESULT 13
```

```
US-09-818-009-12
;   GENERAL INFORMATION:
;        APPLICANT: THE SALK INSTITUTE FOR BIOLOGICAL STUDIES
;        TITLE OF INVENTION: UROCORTIN PEPTIDES
;        NUMBER OF SEQUENCES: 19
;        CORRESPONDENCE ADDRESS:
;             ADDRESSEE: FITCH, EVEN, TABIN & FLANNERY
;             STREET: 120 S. LaSalle Street, Suite 1600
;             CITY: Chicago
;             STATE: Illinois
;             COUNTRY: USA
;             ZIP: 60603
;        COMPUTER READABLE FORM:
;             MEDIUM TYPE: Floppy disk
;             COMPUTER: IBM PC compatible
;             OPERATING SYSTEM: PC-DOS/MS-DOS
;             SOFTWARE: PatentIn Release #1.0, Version #1.30
;        CURRENT APPLICATION DATA:
;             APPLICATION NUMBER: US/09/818,009
;             FILING DATE: 26-Mar-2001
;        PRIOR APPLICATION DATA:
;             APPLICATION NUMBER: US 08/981,189
;             FILING DATE: 10-DEC-1997
;             APPLICATION NUMBER: US 60/028,144
;             FILING DATE: 13-JUN-1995
;             APPLICATION NUMBER: US 60/002,223
;             FILING DATE: 11-AUG-1995
;        ATTORNEY/AGENT INFORMATION:
;             NAME: Schumann, James J.
;             REGISTRATION NUMBER: 20,856
;             REFERENCE/DOCKET NUMBER: 57611
;        TELECOMMUNICATION INFORMATION:
;             TELEPHONE: 858-552-1311
;             TELEFAX: 858-552-0095
;        SEQUENCE DESCRIPTION: SEQ ID NO: 12:
US-09-818-009-12

  Query Match             80.4%;  Score 1793;  DB 10;  Length 411;
  Best Local Similarity   80.0%;  Pred. No. 2.3e-158;
  Matches  333;  Conservative   30;  Mismatches   45;  Indels    8;  Gaps    4;

Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGP--YCSATIDQIGTCWPRSL 58
              ||:    :::   :|||||  |  :  |           |||  ||: |:||||||||:|
Db          1 MDAA---LLLSLLEANCSL--ALAEELLLDGWGEPPDPEGPYSYCNTTLDQIGTCWPQSA 55

Qy         59 AGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNK-RKYALHYKI 117
               | |||||||: ||||:|||||| |||| ||||||| :||| | ||||:| ||| |||:|
Db         56 PGALVERPCPEYFNGIKYNTTRNAYRECLENGTWASRINYSHCEPILDDKQRKYDLHYRI 115

Qy        118 ALIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHN 177
              ||||||||||:|::||| |||||| |||||||||:|||||||||||| |||||:|||
Db        116 ALIINYLGHCVSVVALVAAFLLFLVLRSIRCLRNVIHWNLITTFILRNITWFLLQLIDHE 175

Qy        178 IHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIP 237
              :|| |||||||:|||:|||||||||||||||||||||||||||||: ||||:||||||||
Db        176 VHEGNEVWCRCVTTIFNYFVVTNFFWMFVEGCYLHTAIVMTYSTEHLRKWLFLFIGWCIP 235

Qy        238 SPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLR 297
              |||| ||: ||:||||||| |||||  :|||||| :|||||||||||||||||||||||
Db        236 CPIIVAWAVGKLYYENEQCWFGKEPGDLVDYIYQGPIILVLLINFVFLFNIVRILMTKLR 295

Qy        298 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFV 357
              |||||||||||||||||||||||||||||||||||||:||||||||||||||||||||||
Db        296 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDLSQIVFIYFNSFLQSFQGFFV 355

Qy        358 SVFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||| ||||||| ||||||||||:||| |||||||||||||||||||||||||
Db        356 SVFYCFFNGEVRSALRKRWHRWQDHHALRVPVARAMSIPTSPTRISFHSIKQTAAV 411


RESULT 14
US-09-799-978-18
; Sequence 18, Application US/09799978
; Publication No. US20030165807A1
; GENERAL INFORMATION:
;  APPLICANT:  The Procter & Gamble Company
;  APPLICANT:  Isfort, Robert
;  APPLICANT:  Sheldon, Russell
;  TITLE OF INVENTION:   Methods for Identifying Compounds for Regulating Muscle Mass or
;  TITLE OF INVENTION:  Function Using Corticotropin Releasing Factor Receptors
;  FILE REFERENCE:   8448
;  CURRENT APPLICATION NUMBER: US/09/799,978
;  CURRENT FILING DATE:  2001-03-06
;  NUMBER OF SEQ ID NOS:   44
;  SOFTWARE:   PatentIn version 3.0
; SEQ ID NO 18
;   LENGTH: 411
;   TYPE: PRT
;   ORGANISM: Rattus norvegicus
US-09-799-978-18

  Query Match             80.4%;  Score 1793;  DB 10;  Length 411;
  Best Local Similarity   80.0%;  Pred. No. 2.3e-158;
  Matches  333;  Conservative   30;  Mismatches   45;  Indels    8;  Gaps    4;

Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGP--YCSATIDQIGTCWPRSL 58
              ||:    :::   :|||||  |  :  |           |||  ||: |:||||||||:|
Db          1 MDAA---LLLSLLEANCSL--ALAEELLLDGWGEPPDPEGPYSYCNTTLDQIGTCWPQSA 55

Qy         59 AGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNK-RKYALHYKI 117
               | |||||||: ||||:|||||| |||| ||||||| :||| | ||||:| ||| |||:|
Db         56 PGALVERPCPEYFNGIKYNTTRNAYRECLENGTWASRINYSHCEPILDDKQRKYDLHYRI 115

Qy        118 ALIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHN 177
              ||||||||||:|::||| |||||| |||||||||:|||||||||||| |||||:|||
Db        116 ALIINYLGHCVSVVALVAAFLLFLVLRSIRCLRNVIHWNLITTFILRNITWFLLQLIDHE 175

Qy        178 IHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIP 237
              :|| |||||||:|||:|||||||||||||||||||||||||||||: ||||:||||||||
Db        176 VHEGNEVWCRCVTTIFNYFVVTNFFWMFVEGCYLHTAIVMTYSTEHLRKWLFLFIGWCIP 235

Qy        238 SPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLR 297
              |||| ||: ||:||||||| |||||  :|||||| :|||||||||||||||||||||||
Db        236 CPIIVAWAVGKLYYENEQCWFGKEPGDLVDYIYQGPIILVLLINFVFLFNIVRILMTKLR 295

Qy        298 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFV 357
              |||||||||||||||||||||||||||||||||||||:||||||||||||||||||||||
Db        296 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDLSQIVFIYFNSFLQSFQGFFV 355

Qy        358 SVFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||| ||||||| ||||||||||:||| |||||||||||||||||||||||||
Db        356 SVFYCFFNGEVRSALRKRWHRWQDHHALRVPVARAMSIPTSPTRISFHSIKQTAAV 411


RESULT 15
US-10-649-852-18
; Sequence 18, Application US/10649852
; Publication No. US20040101911A1
; GENERAL INFORMATION:
;  APPLICANT: The Procter & Gamble Company
;  APPLICANT:  Isfort, Robert
;  APPLICANT:  Sheldon, Russell
;  TITLE OF INVENTION: Methods for Identifying Compounds for Regulating Muscle Mass or
;  TITLE OF INVENTION:  Using Corticotropin Releasing Factor Receptors
;  FILE REFERENCE: 8448R
;  CURRENT APPLICATION NUMBER: US/10/649,852
;  CURRENT FILING DATE:  2003-08-27
;  PRIOR APPLICATION NUMBER: US 09/799,978
;  PRIOR FILING DATE: 2001-03-06
;  NUMBER OF SEQ ID NOS: 44
;  SOFTWARE: PatentIn version 3.0
; SEQ ID NO 18
;   LENGTH: 411
;   TYPE: PRT
;   ORGANISM: Rattus norvegicus
US-10-649-852-18
```

```
  Query Match             80.4%;  Score 1793;  DB 16;  Length 411;
  Best Local Similarity   80.0%;  Pred. No. 2.3e-158;
  Matches  333;  Conservative   30;  Mismatches   45;  Indels    8;  Gaps    4;

Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGP--YCSATIDQIGTCWPRSL 58
              ||:    :::   :|||||  |  :  |          |||  ||: |:|||||||:|
Db          1 MDAA---LLLSLLEANCSL--ALAEELLLDGWGEPPDPEGPYSYCNTTLDQIGTCWPQSA 55

Qy         59 AGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNK-RKYALHYKI 117
               | |||||||: ||||:|||||| |||| ||||||| :||| | ||||:| ||| |||:|
Db         56 PGALVERPCPEYFNGIKYNTTRNAYRECLENGTWASRINYSHCEPILDDKQRKYDLHYRI 115

Qy        118 ALIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHN 177
              |||||||||:|::||| |||||| |||||||||:|||||||||||||| |||||:|||
Db        116 ALIINYLGHCVSVVALVAAFLLFLVLRSIRCLRNVIHWNLITTFILRNITWFLLQLIDHE 175

Qy        178 IHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIP 237
              :|| |||||||:|||:|||||||||||||||||||||||||||: ||||:|||||||||
Db        176 VHEGNEVWCRCVTTIFNYFVVTNFFWMFVEGCYLHTAIVMTYSTEHLRKWLFLFIGWCIP 235

Qy        238 SPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLR 297
               |||| ||: ||:||||||| |||||  :|||||| :|||||||||||||||||||||
Db        236 CPIIVAWAVGKLYYENEQCWFGKEPGDLVDYIYQGPIILVLLINFVFLFNIVRILMTKLR 295

Qy        298 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFV 357
              ||||||||||||||||||||||||||||||||||||:|||||||||||||||||||||
Db        296 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDLSQIVFIYFNSFLQSFQGFFV 355

Qy        358 SVFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||| ||||||| ||||||||||:||| |||||||||||||||||||||||||
Db        356 SVFYCFFNGEVRSALRKRWHRWQDHHALRVPVARAMSIPTSPTRISFHSIKQTAAV 411


Search completed: August 20, 2005, 00:42:16
Job time : 165 secs
```

GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: August 20, 2005, 00:23:03 ; Search time 43 Seconds
(without alignments)
716.978 Million cell updates/sec

Title: US-10-649-852-32
Perfect score: 2229
Sequence: 1 MDSTIFEIIIDEFDANCSLL.....SIPTSPTRISFHSIKQTAAV 413

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 513545 seqs, 74649064 residues

Total number of hits satisfying chosen parameters: 513545

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued_Patents_AA:*
1: /cgn2_6/ptodata/1/iaa/5A_COMB.pep:*
2: /cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
3: /cgn2_6/ptodata/1/iaa/6A_COMB.pep:*
4: /cgn2_6/ptodata/1/iaa/6B_COMB.pep:*
5: /cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
6: /cgn2_6/ptodata/1/iaa/backfiles1.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	2229	100.0	413	4	US-09-799-978-32	Sequence 32, Appl
2	1807	81.1	405	4	US-09-799-978-38	Sequence 38, Appl
3	1804	80.9	411	4	US-09-631-603-12	Sequence 12, Appl
4	1799	80.7	411	1	US-08-381-433A-8	Sequence 8, Appli
5	1799	80.7	411	4	US-09-799-978-10	Sequence 10, Appl
6	1799	80.7	411	4	US-09-881-401-8	Sequence 8, Appli
7	1793	80.4	411	1	US-08-381-433A-4	Sequence 4, Appli
8	1793	80.4	411	3	US-08-981-189B-12	Sequence 12, Appl
9	1793	80.4	411	4	US-09-799-978-18	Sequence 18, Appl
10	1793	80.4	411	4	US-09-881-401-4	Sequence 4, Appli
11	1787.5	80.2	397	4	US-09-799-978-14	Sequence 14, Appl
12	1786	80.1	438	4	US-09-799-978-12	Sequence 12, Appl
13	1784.5	80.1	431	3	US-08-981-189B-13	Sequence 13, Appl
14	1784.5	80.1	431	4	US-09-881-401-2	Sequence 2, Appli
15	1778.5	79.8	431	1	US-08-381-433A-2	Sequence 2, Appli
16	1776.5	79.7	431	4	US-09-799-978-20	Sequence 20, Appl
17	1770.5	79.4	431	3	US-08-981-189B-11	Sequence 11, Appl
18	1770.5	79.4	431	3	US-08-482-746-10	Sequence 10, Appl
19	1770.5	79.4	431	4	US-09-580-734-10	Sequence 10, Appl
20	1770.5	79.4	431	4	US-08-374-009-10	Sequence 10, Appl
21	1770.5	79.4	431	4	US-09-191-724-10	Sequence 10, Appl
22	1770.5	79.4	431	4	US-09-799-978-24	Sequence 24, Appl
23	1769	79.4	430	4	US-09-799-978-26	Sequence 26, Appl
24	1582.5	71.0	428	4	US-09-799-978-36	Sequence 36, Appl
25	1582	71.0	420	4	US-09-799-978-42	Sequence 42, Appl
26	1578.5	70.8	445	4	US-09-799-978-34	Sequence 34, Appl
27	1566	70.3	415	1	US-08-110-286A-2	Sequence 2, Appli
28	1566	70.3	415	3	US-08-482-746-2	Sequence 2, Appli
29	1566	70.3	415	4	US-09-580-734-2	Sequence 2, Appli
30	1566	70.3	415	4	US-08-374-009-2	Sequence 2, Appli
31	1566	70.3	415	4	US-09-191-724-2	Sequence 2, Appli
32	1566	70.3	415	4	US-09-799-978-2	Sequence 2, Appli
33	1566	70.3	415	4	US-09-799-978-4	Sequence 4, Appli
34	1564.5	70.2	415	4	US-09-799-978-30	Sequence 30, Appl
35	1560	70.0	415	4	US-09-826-509-483	Sequence 483, App
36	1556.5	69.8	415	3	US-08-482-746-13	Sequence 13, Appl
37	1556.5	69.8	415	4	US-09-580-734-13	Sequence 13, Appl
38	1556.5	69.8	415	4	US-08-374-009-13	Sequence 13, Appl
39	1556.5	69.8	415	4	US-09-191-724-13	Sequence 13, Appl
40	1556.5	69.8	415	4	US-09-799-978-22	Sequence 22, Appl
41	1553	69.7	415	4	US-09-799-978-40	Sequence 40, Appl
42	1551.5	69.6	415	1	US-08-110-286A-6	Sequence 6, Appli
43	1551.5	69.6	415	3	US-08-981-189B-10	Sequence 10, Appl
44	1551.5	69.6	415	3	US-08-482-746-6	Sequence 6, Appli
45	1551.5	69.6	415	4	US-09-580-734-6	Sequence 6, Appli

ALIGNMENTS

RESULT 1
US-09-799-978-32
; Sequence 32, Application US/09799978
; Patent No. 6670140
; GENERAL INFORMATION:
; APPLICANT: The Procter & Gamble Company
; APPLICANT: Isfort, Robert
; APPLICANT: Sheldon, Russell
; TITLE OF INVENTION: Methods for Identifying Compounds for Regulating Muscle Mass or
; TITLE OF INVENTION: Function Using Corticotropin Releasing Factor Receptors
; FILE REFERENCE: 8448
; CURRENT APPLICATION NUMBER: US/09/799,978
; CURRENT FILING DATE: 2001-03-06
; NUMBER OF SEQ ID NOS: 44
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 32
; LENGTH: 413
; TYPE: PRT
; ORGANISM: Xenopus laevis
US-09-799-978-32

Query Match 100.0%; Score 2229; DB 4; Length 413;
Best Local Similarity 100.0%; Pred. No. 1.2e-200;
Matches 413; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGPYCSATIDQIGTCWPRSLAG 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGPYCSATIDQIGTCWPRSLAG 60

Qy         61 ELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNKRKYALHYKIALI 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 ELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNKRKYALHYKIALI 120

Qy        121 INYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHNIHE 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 INYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHNIHE 180

Qy        181 SNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIPSPI 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIPSPI 240

Qy        241 IVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLRAST 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 IVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLRAST 300

Qy        301 TSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFVSVF 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFVSVF 360

Qy        361 YCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
```

```
                ||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 YCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413


RESULT 2
US-09-799-978-38
; Sequence 38, Application US/09799978
; Patent No. 6670140
; GENERAL INFORMATION:
;  APPLICANT:  The Procter & Gamble Company
;  APPLICANT:  Isfort, Robert
;  APPLICANT:  Sheldon, Russell
;  TITLE OF INVENTION:   Methods for Identifying Compounds for Regulating Muscle Mass or
;  TITLE OF INVENTION:  Function Using Corticotropin Releasing Factor Receptors
;  FILE REFERENCE:   8448
;  CURRENT APPLICATION NUMBER: US/09/799,978
;  CURRENT FILING DATE:  2001-03-06
;  NUMBER OF SEQ ID NOS:   44
;  SOFTWARE:   PatentIn version 3.0
; SEQ ID NO 38
;   LENGTH: 405
;   TYPE: PRT
;   ORGANISM: Ameiurus nebulosus
US-09-799-978-38

  Query Match             81.1%;  Score 1807;  DB 4;  Length 405;
  Best Local Similarity   79.9%;  Pred. No. 4e-161;
  Matches  330;  Conservative   33;  Mismatches   42;  Indels    8;  Gaps    2;

Qy          1 MDSTIPEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGPYCSATIDQIGTCWPRSLAG 60
              |: :: |::    : |||| ||| |    : | :       ||:|| |:||||||| ||
Db          1 MEVSLLELL--SVEVNCSLADAFGDPAYGNASDAL------YCNATADEIGTCWPRSGAG 52

Qy         61 ELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNKRKYALHYKIALI 120
               :| |||||  ||::||:||: |||| ||||||  :||| | |||: |||| :|||||||
Db         53 RVVARPCPDFINGVKYNSTRSAYRECLENGTWAFKINYSSCEPILEEKRKYPVHYKIALI 112

Qy        121 INYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHNIHE 180
              |||||||||: ||||||:|||||||||||||:|||||||||||||| |||:|||||||
Db        113 INYLGHCISVGALVIAFVLFLCLRSIRCLRNVIHWNLITTFILRNIMWLLLQLIDHNIHE 172

Qy        181 SNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIPSPI 240
              || ||| |||:|||||||||||||||||||||||||||||||||||||||||||||||| |:
Db        173 RNEPWCRLITTVYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIPCPV 232

Qy        241 IVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLRAST 300
              |: ||: ||: |||||| |||||||:|||||| ||:|||||||||||||||||||||||
Db        233 IIAWAVGKLYNENEQCWFGKEPGKYVDYIYQGPVIVVLLINFVFLFNIVRILMTKLRAST 292

Qy        301 TSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFVSVF 360
              |||||||||||||||||||||||||||||||:||:|||||||||||||||||||||||||
Db        293 TSETIQYRKAVKATLVLLPLLGITYMLFFVNPGDDDISQIVFIYFNSFLQSFQGFFVSVF 352

Qy        361 YCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||||||| |||||||||:|:|||||||||||||||||||||||| | ||
Db        353 YCFLNGEVRSAVRKRWHRWQDNHALRVRVARAMSIPTSPTRISFHSIKHTTAV 405


RESULT 3
US-09-631-603-12
; Sequence 12, Application US/09631603
; Patent No. 6733990
; GENERAL INFORMATION:
;  APPLICANT:  Hodge, Martin R.
;  APPLICANT:  Lloyd, Clare
;  APPLICANT:  Weich, Nadine
;  TITLE OF INVENTION:  15571, A No. 6733990el GPCR-like Molecule of the
;  TITLE OF INVENTION:  Secretin-Like Family and Uses Thereof
;  FILE REFERENCE:  5800-48A
;  CURRENT APPLICATION NUMBER: US/09/631,603
;  CURRENT FILING DATE:  2000-08-03
;  PRIOR APPLICATION NUMBER:  09/515,781
;  PRIOR FILING DATE:  2000-02-29
;  PRIOR APPLICATION NUMBER:  60/146,916
;  PRIOR FILING DATE:  2000-08-03
;  NUMBER OF SEQ ID NOS:  24
;  SOFTWARE:  FastSEQ for Windows Version 3.0
; SEQ ID NO 12
;   LENGTH: 411
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-631-603-12

  Query Match             80.9%;  Score 1804;  DB 4;  Length 411;
  Best Local Similarity   80.0%;  Pred. No. 7.7e-161;
  Matches  333;  Conservative   33;  Mismatches   42;  Indels    8;  Gaps    4;

Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGP--YCSATIDQIGTCWPRSL 58
              ||: :   ::   :|||||  |  :  |          |||  ||: |:||||||||||
Db          1 MDAALLHSLL---EANCSL--ALAEELLLDGWGPPLDPEGPYSYCNTTLDQIGTCWPRSA 55

Qy         59 AGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNK-RKYALHYKI 117
              || |||||||: |||::|||||| |||| |||||||  :|||| |||||: ||| |||:|
Db         56 AGALVERPCPEYFNGVKYNTTRNAYRECLENGTWASKINYSQCEPILDDKQRKYDLHYRI 115

Qy        118 ALIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHN 177
              ||::||||||:|: ||| |||||| |||||||||:||||||||||||:||||||::||
Db        116 ALVVNYLGHCVSVAALVAAFLLFLALRSIRCLRNVIHWNLITTFILRNVMWFLLQLVDHE 175

Qy        178 IHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIP 237
              :|||||||||||||:|||||||||||||||||||||||||||||::||| :|||||||||
Db        176 VHESNEVWCRCITTIFNYFVVTNFFWMFVEGCYLHTAIVMTYSTERLRKCLFLFIGWCIP 235

Qy        238 SPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLR 297
              |||| ||| ||:||||||| |||||  :|||||| :|||||||||||||||||||||||
Db        236 FPIIVAWAIGKLYYENEQCWFGKEPGDLVDYIYQGPIILVLLINFVFLFNIVRILMTKLR 295

Qy        298 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFV 357
              |||||||||||||||||||||||||||||||||||||||||:|||:|||||||||||||||
Db        296 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDLSQIMFIYFNSFLQSFQGFFV 355

Qy        358 SVFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||| ||||||| |||||||||||||| :|||||||||||||||||||||||||
Db        356 SVFYCFFNGEVRSAVRKRWHRWQDHHSLRVPMARAMSIPTSPTRISFHSIKQTAAV 411


RESULT 4
US-08-381-433A-8
; Sequence 8, Application US/08381433A
; Patent No. 5786203
;  GENERAL INFORMATION:
;    APPLICANT:  Lovenberg, Timothy W.
;    APPLICANT:  Oltersdorf, Tilman
;    APPLICANT:  Liaw, Chen
;    APPLICANT:  Grigoriadis, Dimitri E.
;    APPLICANT:  DeSouza, Errol B.
;    TITLE OF INVENTION:  CORTICOTROPIN RELEASING FACTOR 2
;    TITLE OF INVENTION:  RECEPTORS
;    NUMBER OF SEQUENCES:  8
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  SEED and BERRY
;      STREET:  6300 Columbia Center, 701 Fifth Avenue
;      CITY:  Seattle
;      STATE:  Washington
;      COUNTRY:  USA
;      ZIP:  98104-7092
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/381,433A
;      FILING DATE:  31-JAN-1995
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
```

```
;      NAME:  McMasters, David D.
;      REGISTRATION NUMBER:  33,963
;      REFERENCE/DOCKET NUMBER:  690068.401C1
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (206) 622-4900
;      TELEFAX:  (206) 682-6031
;      TELEX:  3723836 SEEDANDBERRY
;  INFORMATION FOR SEQ ID NO:  8:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  411 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-381-433A-8

  Query Match             80.7%;  Score 1799;  DB 1;  Length 411;
  Best Local Similarity   79.8%;  Pred. No. 2.3e-160;
  Matches  332;  Conservative   33;  Mismatches   43;  Indels    8;  Gaps    4;

Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGP--YCSATIDQIGTCWPRSL 58
              ||: :   ::   :|||||  |  : |          |||  ||: |:||||||||||
Db          1 MDAALLHSLL---EANCSL--ALAEELLLDGWGPPLDPEGPYSYCNTTLDQIGTCWPRSA 55

Qy         59 AGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNK-RKYALHYKI 117
              || |||||||: |||::|||||| |||| ||||||| :|||| ||||:| ||| |||:|
Db         56 AGALVERPCPEYFNGVKYNTTRNAYRECLENGTWASKINYSQCEPILDDKQRKYDLHYRI 115

Qy        118 ALIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHN 177
              ||::||||||:|: ||| |||||| |||||||||:|||||||||||||:||||||::||
Db        116 ALVVNYLGHCVSVAALVAAFLLFLALRSIRCLRNVIHWNLITTFILRNVMWFLLQLVDHE 175

Qy        178 IHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIP 237
              :|||||||| |||||:|||||||||||||||||||||||||::||| :|||||||||
Db        176 VHESNEVWCHCITTIFNYFVVTNFFWMFVEGCYLHTAIVMTYSTERLRKCLFLFIGWCIP 235

Qy        238 SPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLR 297
               |||| ||| ||:||||||| |||||  :|||||| :|||||||||||||||||||||
Db        236 FPIIVAWAIGKLYYENEQCWFGKEPGDLVDYIYQGPIILVLLINFVFLFNIVRILMTKLR 295

Qy        298 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFV 357
              ||||||||||||||||||||||||||||||||||||:|||:|||||||||||||||||||
Db        296 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDLSQIMFIYFNSFLQSFQGFFV 355

Qy        358 SVFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||| ||||||| |||||||||||||| :|||||||||||||||||||||||||
Db        356 SVFYCFFNGEVRSAVRKRWHRWQDHHSLRVPMARAMSIPTSPTRISFHSIKQTAAV 411


RESULT 5
US-09-799-978-10
; Sequence 10, Application US/09799978
; Patent No. 6670140
; GENERAL INFORMATION:
;  APPLICANT:  The Procter & Gamble Company
;  APPLICANT:  Isfort, Robert
;  APPLICANT:  Sheldon, Russell
;  TITLE OF INVENTION:  Methods for Identifying Compounds for Regulating Muscle Mass or
;  TITLE OF INVENTION:  Function Using Corticotropin Releasing Factor Receptors
;  FILE REFERENCE:  8448
;  CURRENT APPLICATION NUMBER: US/09/799,978
;  CURRENT FILING DATE:  2001-03-06
;  NUMBER OF SEQ ID NOS:  44
;  SOFTWARE:  PatentIn version 3.0
; SEQ ID NO 10
;  LENGTH: 411
;  TYPE: PRT
;  ORGANISM: Homo sapiens
US-09-799-978-10

  Query Match             80.7%;  Score 1799;  DB 4;  Length 411;
  Best Local Similarity   79.8%;  Pred. No. 2.3e-160;
  Matches  332;  Conservative   33;  Mismatches   43;  Indels    8;  Gaps    4;

Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGP--YCSATIDQIGTCWPRSL 58
              ||: :   ::   :|||||  |  : |          |||  ||: |:||||||||||
Db          1 MDAALLHSLL---EANCSL--ALAEELLLDGWGPPLDPEGPYSYCNTTLDQIGTCWPRSA 55

Qy         59 AGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNK-RKYALHYKI 117
              || |||||||: |||::|||||| |||| ||||||| :|||| ||||:| ||| |||:|
Db         56 AGALVERPCPEYFNGVKYNTTRNAYRECLENGTWASKINYSQCEPILDDKQRKYDLHYRI 115

Qy        118 ALIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHN 177
              ||::||||||:|: ||| |||||| |||||||||:|||||||||||||:||||||::||
Db        116 ALVVNYLGHCVSVAALVAAFLLFLALRSIRCLRNVIHWNLITTFILRNVMWFLLQLVDHE 175

Qy        178 IHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIP 237
              :|||||||| |||||:|||||||||||||||||||||||||::||| :|||||||||
Db        176 VHESNEVWCHCITTIFNYFVVTNFFWMFVEGCYLHTAIVMTYSTERLRKCLFLFIGWCIP 235

Qy        238 SPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLR 297
               |||| ||| ||:||||||| |||||  :|||||| :|||||||||||||||||||||
Db        236 FPIIVAWAIGKLYYENEQCWFGKEPGDLVDYIYQGPIILVLLINFVFLFNIVRILMTKLR 295

Qy        298 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFV 357
              ||||||||||||||||||||||||||||||||||||:|||:|||||||||||||||||||
Db        296 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDLSQIMFIYFNSFLQSFQGFFV 355

Qy        358 SVFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||| ||||||| |||||||||||||| :|||||||||||||||||||||||||
Db        356 SVFYCFFNGEVRSAVRKRWHRWQDHHSLRVPMARAMSIPTSPTRISFHSIKQTAAV 411


RESULT 6
US-09-881-401-8
; Sequence 8, Application US/09881401
; Patent No. 6723841
;  GENERAL INFORMATION:
;       APPLICANT: Lovenberg, Timothy W.
;                  Oltersdorf, Tilman
;                  Liaw, Chen
;                  Grigoriadis, Dimitri E.
;                  Chalmers, Derek T.
;                  DeSouza, Errol B.
;       TITLE OF INVENTION: CORTICOTROPIN RELEASING FACTOR 2
;                           RECEPTORS
;       NUMBER OF SEQUENCES: 8
;       CORRESPONDENCE ADDRESS:
;            ADDRESSEE: Seed Intellectual Property Law Group
;            STREET: 701 Fifth Avenue, Suite 6300
;            CITY: Seattle
;            STATE: Washington
;            COUNTRY: USA
;            ZIP: 98104-7092
;       COMPUTER READABLE FORM:
;            MEDIUM TYPE: Floppy disk
;            COMPUTER: IBM PC compatible
;            OPERATING SYSTEM: PC-DOS/MS-DOS
;            SOFTWARE: PatentIn Release #1.0, Version #1.25
;       CURRENT APPLICATION DATA:
;            APPLICATION NUMBER: US/09/881,401
;            FILING DATE: 13-Jun-2001
;            CLASSIFICATION: <Unknown>
;       ATTORNEY/AGENT INFORMATION:
;            NAME: Christiansen, William T.
;            REGISTRATION NUMBER: 44,614
;            REFERENCE/DOCKET NUMBER: 690068.401C4
;       TELECOMMUNICATION INFORMATION:
;            TELEPHONE: (206) 622-4900
;            TELEFAX: (206) 682-6031
;  INFORMATION FOR SEQ ID NO: 8:
;       SEQUENCE CHARACTERISTICS:
;            LENGTH: 411 amino acids
;            TYPE: amino acid
;            TOPOLOGY: linear
;       MOLECULE TYPE: protein
;       SEQUENCE DESCRIPTION: SEQ ID NO: 8:
```

```
US-09-881-401-8

  Query Match             80.7%;  Score 1799;  DB 4;  Length 411;
  Best Local Similarity   79.8%;  Pred. No. 2.3e-160;
  Matches  332;  Conservative   33;  Mismatches   43;  Indels    8;  Gaps    4;

Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGP--YCSATIDQIGTCWPRSL 58
              ||: :   ::   :|||||  |  :  |          |||  ||: |:|||||||||| 
Db          1 MDAALLHSLL---EANCSL--ALAEELLLDGWGPPLDPEGPYSYCNTTLDQIGTCWPRSA 55

Qy         59 AGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNK-RKYALHYKI 117
              || |||||||: |||::|||||| |||| ||||||| :|||| |||:| ||| |||:| 
Db         56 AGALVERPCPEYFNGVKYNTTRNAYRECLENGTWASKINYSQCEPILDDKQRKYDLHYRI 115

Qy        118 ALIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHN 177
              ||::||||||:|: ||| |||||| |||||||||:|||||||||||||:||||||::||
Db        116 ALVVNYLGHCVSVAALVAAFLLFLALRSIRCLRNVIHWNLITTFILRNVMWFLLQLVDHE 175

Qy        178 IHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIP 237
              :|||||||| |||||:|||||||||||||||||||||||::||| :|||||||||
Db        176 VHESNEVWCHCITTIFNYFVVTNFFWMFVEGCYLHTAIVMTYSTERLRKCLFLFIGWCIP 235

Qy        238 SPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLR 297
              |||| ||| ||:||||||| |||||  :|||||| :||||||||||||||||||||||
Db        236 FPIIVAWAIGKLYYENEQCWFGKEPGDLVDYIYQGPIILVLLINFVFLFNIVRILMTKLR 295

Qy        298 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFV 357
              |||||||||||||||||||||||||||||||||||||:|||:||||||||||||||||||
Db        296 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDLSQIMFIYFNSFLQSFQGFFV 355

Qy        358 SVFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||| ||||||| |||||||||||||| :|||||||||||||||||||||||||
Db        356 SVFYCFFNGEVRSAVRKRWHRWQDHHSLRVPMARAMSIPTSPTRISFHSIKQTAAV 411


RESULT 7
US-08-381-433A-4
; Sequence 4, Application US/08381433A
; Patent No. 5786203
;  GENERAL INFORMATION:
;    APPLICANT:  Lovenberg, Timothy W.
;    APPLICANT:  Oltersdorf, Tilman
;    APPLICANT:  Liaw, Chen
;    APPLICANT:  Grigoriadis, Dimitri E.
;    APPLICANT:  DeSouza, Errol B.
;    TITLE OF INVENTION:  CORTICOTROPIN RELEASING FACTOR 2
;    TITLE OF INVENTION:  RECEPTORS
;    NUMBER OF SEQUENCES:  8
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  SEED and BERRY
;      STREET:  6300 Columbia Center, 701 Fifth Avenue
;      CITY:  Seattle
;      STATE:  Washington
;      COUNTRY:  USA
;      ZIP:  98104-7092
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/381,433A
;      FILING DATE:  31-JAN-1995
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  McMasters, David D.
;      REGISTRATION NUMBER:  33,963
;      REFERENCE/DOCKET NUMBER:  690068.401C1
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (206) 622-4900
;      TELEFAX:  (206) 682-6031
;      TELEX:  3723836 SEEDANDBERRY
;  INFORMATION FOR SEQ ID NO:  4:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  411 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-381-433A-4

  Query Match             80.4%;  Score 1793;  DB 1;  Length 411;
  Best Local Similarity   80.0%;  Pred. No. 8.3e-160;
  Matches  333;  Conservative   30;  Mismatches   45;  Indels    8;  Gaps    4;

Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGP--YCSATIDQIGTCWPRSL 58
              ||:    :::   :|||||  |  :  |          |||  ||: |:|||||||:| 
Db          1 MDAA---LLLSLLEANCSL--ALAEELLLDGWGEPPDPEGPYSYCNTTLDQIGTCWPQSA 55

Qy         59 AGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNK-RKYALHYKI 117
              | |||||||: |||||||||| |||| ||||||| :||| | ||||:| ||| |||:| 
Db         56 PGALVERPCPEYFNGIKYNTTRNAYRECLENGTWASRINYSHCEPILDDKQRKYDLHYRI 115

Qy        118 ALIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHN 177
              ||||||||||:|::||| |||||| |||||||||:|||||||||||||| |||||:|||
Db        116 ALIINYLGHCVSVVALVAAFLLFLVLRSIRCLRNVIHWNLITTFILRNITWFLLQLIDHE 175

Qy        178 IHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIP 237
              :|| |||||||:|||:|||||||||||||||||||||||||||: ||||:|||||||||
Db        176 VHEGNEVWCRCVTTIFNYFVVTNFFWMFVEGCYLHTAIVMTYSTEHLRKWLFLFIGWCIP 235

Qy        238 SPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLR 297
              |||| ||: ||:|||||||  |||||  :|||||| :|||||||||||||||||||||||
Db        236 CPIIVAWAVGKLYYENEQCWFGKEPGDLVDYIYQGPIILVLLINFVFLFNIVRILMTKLR 295

Qy        298 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFV 357
              |||||||||||||||||||||||||||||||||||||:|||||||||||||||||||||
Db        296 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDLSQIVFIYFNSFLQSFQGFFV 355

Qy        358 SVFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||| ||||||| |||||||||||:||| |||||||||||||||||||||||||
Db        356 SVFYCFFNGEVRSALRKRWHRWQDHHALRVPVARAMSIPTSPTRISFHSIKQTAAV 411


RESULT 8
US-08-981-189B-12
; Sequence 12, Application US/08981189B
; Patent No. 6214797
;  GENERAL INFORMATION:
;    APPLICANT:
;    TITLE OF INVENTION:  UROCORTIN PEPTIDES
;    NUMBER OF SEQUENCES:  19
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  FITCH, EVEN, TABIN & FLANNERY
;      STREET:  120 S. LaSalle Street, Suite 1600
;      CITY:  Chicago
;      STATE:  Illinois
;      COUNTRY:  USA
;      ZIP:  60603
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/981,189B
;      FILING DATE:  10-DEC-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/028,144
;      FILING DATE:  13-JUN-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/002,223
;      FILING DATE:  11-AUG-1995
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Schumann, James J.
;      REGISTRATION NUMBER:  20,856
;      REFERENCE/DOCKET NUMBER:  57611
```

```
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  858-552-1311
;      TELEFAX:  858-552-0095
;  INFORMATION FOR SEQ ID NO:  12:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  411 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    FEATURE:
;      NAME/KEY:  Protein
;      LOCATION:  1..411
;      OTHER INFORMATION:  /note= "Rat CRF-R2 Short Form"
;    PUBLICATION INFORMATION:
;      AUTHORS:  Lovenberg, Timothy W
;      AUTHORS:  Liaw, Chen W
;      AUTHORS:  Grigoriadis, Dimitri E
;      AUTHORS:  Clevenger, William
;      AUTHORS:  Chalmers, Derek T
;      AUTHORS:  DeSouza, Errol B
;      AUTHORS:  Oltersdorf, Tilman
;      TITLE:  Cloning and characterization of a
;      TITLE:  functionally distinct corticotropin-releasing
;      TITLE:  factor receptor subtype from rat brain
;      JOURNAL:  Proc. Natl. Acad. Sci. U.S.A.
;      VOLUME:  92
;      PAGES:  836-840
;      DATE:  January-1995
US-08-981-189B-12

  Query Match             80.4%;  Score 1793;  DB 3;  Length 411;
  Best Local Similarity   80.0%;  Pred. No. 8.3e-160;
  Matches  333;  Conservative   30;  Mismatches   45;  Indels    8;  Gaps    4;

Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGP--YCSATIDQIGTCWPRSL 58
              ||:    :::   :|||||  |  :  |          |||  ||: |:|||||||:|
Db          1 MDAA---LLLSLLEANCSL--ALAEELLLDGWGEPPDPEGPYSYCNTTLDQIGTCWPQSA 55

Qy         59 AGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNK-RKYALHYKI 117
               | |||||||: ||||:|||||| |||| ||||||| :||| | ||||:| ||| |||:|
Db         56 PGALVERPCPEYFNGIKYNTTRNAYRECLENGTWASRINYSHCEPILDDKQRKYDLHYRI 115

Qy        118 ALIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHN 177
              ||||||||||:|:::||| |||||| |||||||||:|||||||||||||| |||||:|||
Db        116 ALIINYLGHCVSVVALVAAFLLFLVLRSIRCLRNVIHWNLITTFILRNITWFLLQLIDHE 175

Qy        178 IHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIP 237
              :|| |||||||:|||:|||||||||||||||||||||||||: ||||:|||||||||
Db        176 VHEGNEVWCRCVTTIFNYFVVTNFFWMFVEGCYLHTAIVMTYSTEHLRKWLFLFIGWCIP 235

Qy        238 SPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLR 297
               |||| ||: ||:|||||| |||||  :|||||| :|||||||||||||||||||||||
Db        236 CPIIVAWAVGKLYYENEQCWFGKEPGDLVDYIYQGPIILVLLINFVFLFNIVRILMTKLR 295

Qy        298 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFV 357
              ||||||||||||||||||||||||||||||||||||||:||||||||||||||||||||||
Db        296 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDLSQIVFIYFNSFLQSFQGFFV 355

Qy        358 SVFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||| ||||||| ||||||||||:||| |||||||||||||||||||||||||
Db        356 SVFYCFFNGEVRSALRKRWHRWQDHHALRVPVARAMSIPTSPTRISFHSIKQTAAV 411


RESULT 9
US-09-799-978-18
; Sequence 18, Application US/09799978
; Patent No. 6670140
; GENERAL INFORMATION:
;  APPLICANT:  The Procter & Gamble Company
;  APPLICANT:  Isfort, Robert
;  APPLICANT:  Sheldon, Russell
;  TITLE OF INVENTION:   Methods for Identifying Compounds for Regulating Muscle Mass or
;  TITLE OF INVENTION:  Function Using Corticotropin Releasing Factor Receptors
;  FILE REFERENCE:  8448
;  CURRENT APPLICATION NUMBER: US/09/799,978
;  CURRENT FILING DATE:  2001-03-06
;  NUMBER OF SEQ ID NOS:  44
;  SOFTWARE:  PatentIn version 3.0
; SEQ ID NO 18
;  LENGTH: 411
;  TYPE: PRT
;  ORGANISM: Rattus norvegicus
US-09-799-978-18

  Query Match             80.4%;  Score 1793;  DB 4;  Length 411;
  Best Local Similarity   80.0%;  Pred. No. 8.3e-160;
  Matches  333;  Conservative   30;  Mismatches   45;  Indels    8;  Gaps    4;

Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGP--YCSATIDQIGTCWPRSL 58
              ||:    :::   :|||||  |  :  |          |||  ||: |:|||||||:|
Db          1 MDAA---LLLSLLEANCSL--ALAEELLLDGWGEPPDPEGPYSYCNTTLDQIGTCWPQSA 55

Qy         59 AGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNK-RKYALHYKI 117
               | |||||||: ||||:|||||| |||| ||||||| :||| | ||||:| ||| |||:|
Db         56 PGALVERPCPEYFNGIKYNTTRNAYRECLENGTWASRINYSHCEPILDDKQRKYDLHYRI 115

Qy        118 ALIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHN 177
              ||||||||||:|:::||| |||||| |||||||||:|||||||||||||| |||||:|||
Db        116 ALIINYLGHCVSVVALVAAFLLFLVLRSIRCLRNVIHWNLITTFILRNITWFLLQLIDHE 175

Qy        178 IHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIP 237
              :|| |||||||:|||:|||||||||||||||||||||||||: ||||:|||||||||
Db        176 VHEGNEVWCRCVTTIFNYFVVTNFFWMFVEGCYLHTAIVMTYSTEHLRKWLFLFIGWCIP 235

Qy        238 SPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLR 297
               |||| ||: ||:|||||| |||||  :|||||| :|||||||||||||||||||||||
Db        236 CPIIVAWAVGKLYYENEQCWFGKEPGDLVDYIYQGPIILVLLINFVFLFNIVRILMTKLR 295

Qy        298 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFV 357
              ||||||||||||||||||||||||||||||||||||||:||||||||||||||||||||||
Db        296 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDLSQIVFIYFNSFLQSFQGFFV 355

Qy        358 SVFYCFFNGEVRSALRKRWHRWQDHHALRVPVARAMSIPTSPTRISFHSIKQTAAV 411
              |||||| ||||||| ||||||||||:||| |||||||||||||||||||||||||
Db        356 SVFYCFFNGEVRSALRKRWHRWQDHHALRVPVARAMSIPTSPTRISFHSIKQTAAV 411


RESULT 10
US-09-881-401-4
; Sequence 4, Application US/09881401
; Patent No. 6723841
;  GENERAL INFORMATION:
;       APPLICANT: Lovenberg, Timothy W.
;                  Oltersdorf, Tilman
;                  Liaw, Chen
;                  Grigoriadis, Dimitri E.
;                  Chalmers, Derek T.
;                  DeSouza, Errol B.
;       TITLE OF INVENTION: CORTICOTROPIN RELEASING FACTOR 2
;                           RECEPTORS
;       NUMBER OF SEQUENCES: 8
;       CORRESPONDENCE ADDRESS:
;            ADDRESSEE: Seed Intellectual Property Law Group
;            STREET: 701 Fifth Avenue, Suite 6300
;            CITY: Seattle
;            STATE: Washington
;            COUNTRY: USA
;            ZIP: 98104-7092
;       COMPUTER READABLE FORM:
;            MEDIUM TYPE: Floppy disk
;            COMPUTER: IBM PC compatible
;            OPERATING SYSTEM: PC-DOS/MS-DOS
;            SOFTWARE: PatentIn Release #1.0, Version #1.25
;       CURRENT APPLICATION DATA:
;            APPLICATION NUMBER: US/09/881,401
;            FILING DATE: 13-Jun-2001
```

```
;             CLASSIFICATION: <Unknown>
;        ATTORNEY/AGENT INFORMATION:
;             NAME: Christiansen, William T.
;             REGISTRATION NUMBER: 44,614
;             REFERENCE/DOCKET NUMBER: 690068.401C4
;        TELECOMMUNICATION INFORMATION:
;             TELEPHONE: (206) 622-4900
;             TELEFAX: (206) 682-6031
;    INFORMATION FOR SEQ ID NO: 4:
;        SEQUENCE CHARACTERISTICS:
;             LENGTH: 411 amino acids
;             TYPE: amino acid
;             TOPOLOGY: linear
;        MOLECULE TYPE: protein
;        SEQUENCE DESCRIPTION: SEQ ID NO: 4:
US-09-881-401-4

  Query Match             80.4%;  Score 1793;  DB 4;  Length 411;
  Best Local Similarity   80.0%;  Pred. No. 8.3e-160;
  Matches  333;  Conservative   30;  Mismatches   45;  Indels    8;  Gaps    4;

Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGP--YCSATIDQIGTCWPRSL 58
              ||:    :::   :|||||  |  :  |          |||  ||: |:|||||||:|
Db          1 MDAA---LLLSLLEANCSL--ALAEELLLDGWGEPPDPEGPYSYCNTTLDQIGTCWPQSA 55

Qy         59 AGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNK-RKYALHYKI 117
               | |||||||: ||||:|||||| |||| ||||||| :||| | ||||:| ||| |||:|
Db         56 PGALVERPCPEYFNGIKYNTTRNAYRECLENGTWASRINYSHCEPILDDKQRKYDLHYRI 115

Qy        118 ALIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHN 177
              ||||||||||:|::||| |||||| |||||||||:|||||||||||||| |||||:|||
Db        116 ALIINYLGHCVSVVALVAAFLLFLVLRSIRCLRNVIHWNLITTFILRNITWFLLQLIDHE 175

Qy        178 IHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIP 237
              :|| |||||||:|||:|||||||||||||||||||||||||: ||||:|||||||||
Db        176 VHEGNEVWCRCVTTIFNYFVVTNFFWMFVEGCYLHTAIVMTYSTEHLRKWLFLFIGWCIP 235

Qy        238 SPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLR 297
               |||| ||: ||:|||||||| |||||  :|||||| :|||||||||||||||||||||
Db        236 CPIIVAWAVGKLYYENEQCWFGKEPGDLVDYIYQGPIILVLLINFVFLFNIVRILMTKLR 295

Qy        298 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFV 357
              ||||||||||||||||||||||||||||||||||||:||||||||||||||||||||||
Db        296 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDLSQIVFIYFNSFLQSFQGFFV 355

Qy        358 SVFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||| ||||||| ||||||||||:||| ||||||||||||||||||||||||
Db        356 SVFYCFFNGEVRSALRKRWHRWQDHHALRVPVARAMSIPTSPTRISFHSIKQTAAV 411


RESULT 11
US-09-799-978-14
; Sequence 14, Application US/09799978
; Patent No. 6670140
; GENERAL INFORMATION:
;  APPLICANT:  The Procter & Gamble Company
;  APPLICANT:  Isfort, Robert
;  APPLICANT:  Sheldon, Russell
;  TITLE OF INVENTION:   Methods for Identifying Compounds for Regulating Muscle Mass or
;  TITLE OF INVENTION:  Function Using Corticotropin Releasing Factor Receptors
;  FILE REFERENCE:   8448
;  CURRENT APPLICATION NUMBER: US/09/799,978
;  CURRENT FILING DATE:  2001-03-06
;  NUMBER OF SEQ ID NOS:   44
;  SOFTWARE:   PatentIn version 3.0
; SEQ ID NO 14
;   LENGTH: 397
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-799-978-14

  Query Match             80.2%;  Score 1787.5;  DB 4;  Length 397;
  Best Local Similarity   85.4%;  Pred. No. 2.6e-159;
  Matches  323;  Conservative   28;  Mismatches   24;  Indels    3;  Gaps    2;

Qy         39 EGP--YCSATIDQIGTCWPRSLAGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWM 96
              :||  ||: |:|||||||||| || |||||||: |||::|||||| |||| ||||||| :
Db         20 QGPYSYCNTTLDQIGTCWPRSAAGALVERPCPEYFNGVKYNTTRNAYRECLENGTWASKI 79

Qy         97 NYSQCVPILDNK-RKYALHYKIALIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIHW 155
              ||||| ||||:| ||| ||||:|||::|||||:|: ||| |||||| ||||||||:|||
Db         80 NYSQCEPILDDKQRKYDLHYRIALVVNYLGHCVSVAALVAAFLLFLALRSIRCLRNVIHW 139

Qy        156 NLITTFILRNIMWFLLQMIDHNIHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAI 215
              ||||||||||:||||||::|| :|||||||||||||:|||||||||||||||||||||||
Db        140 NLITTFILRNVMWFLLQLVDHEVHESNEVWCRCITTIFNYFVVTNFFWMFVEGCYLHTAI 199

Qy        216 VMTYSTDKLRKWVFLFIGWCIPSPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVI 275
              ||||||::||| :||||||||| |||| ||| ||:||||||| |||||  :|||||| :|
Db        200 VMTYSTERLRKCLFLFIGWCIPFPIIVAWAIGKLYYENEQCWFGKEPGDLVDYIYQGPII 259

Qy        276 LVLLINFVFLFNIVRILMTKLRASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGED 335
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        260 LVLLINFVFLFNIVRILMTKLRASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGED 319

Qy        336 DVSQIVFIYFNSFLQSFQGFFVSVFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSI 395
              |:|||:|||||||||||||||||||| ||||||| |||||||||||||| :||||||
Db        320 DLSQIMFIYFNSFLQSFQGFFVSVFYCFFNGEVRSAVRKRWHRWQDHHSLRVPMARAMSI 379

Qy        396 PTSPTRISFHSIKQTAAV 413
              ||||||||||||||||||
Db        380 PTSPTRISFHSIKQTAAV 397


RESULT 12
US-09-799-978-12
; Sequence 12, Application US/09799978
; Patent No. 6670140
; GENERAL INFORMATION:
;  APPLICANT:  The Procter & Gamble Company
;  APPLICANT:  Isfort, Robert
;  APPLICANT:  Sheldon, Russell
;  TITLE OF INVENTION:   Methods for Identifying Compounds for Regulating Muscle Mass or
;  TITLE OF INVENTION:  Function Using Corticotropin Releasing Factor Receptors
;  FILE REFERENCE:   8448
;  CURRENT APPLICATION NUMBER: US/09/799,978
;  CURRENT FILING DATE:  2001-03-06
;  NUMBER OF SEQ ID NOS:   44
;  SOFTWARE:   PatentIn version 3.0
; SEQ ID NO 12
;   LENGTH: 438
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-799-978-12

  Query Match             80.1%;  Score 1786;  DB 4;  Length 438;
  Best Local Similarity   82.3%;  Pred. No. 4.1e-159;
  Matches  325;  Conservative   31;  Mismatches   35;  Indels    4;  Gaps    3;

Qy         22 AFQDSFLHSESSSFFGFEGP--YCSATIDQIGTCWPRSLAGELVERPCPDSFNGIRYNTT 79
              |  : : |:   :     ||  ||: |:|||||||||| || |||||||: |||::||||
Db         45 ALLEQYCHT-IMTLTNLSGPYSYCNTTLDQIGTCWPRSAAGALVERPCPEYFNGVKYNTT 103

Qy         80 RNVYRECFENGTWASWMNYSQCVPILDNK-RKYALHYKIALIINYLGHCISILALVIAFL 138
              || |||| ||||||| :|||| |||:| ||| |||:|||::|||||:|: ||| |||
Db        104 RNAYRECLENGTWASKINYSQCEPILDDKQRKYDLHYRIALVVNYLGHCVSVAALVAAFL 163

Qy        139 LFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHNIHESNEVWCRCITTIYNYFVV 198
              ||| |||||||||:|||||||||||||:|||||::|| :|||||||||||||:|||||
Db        164 LFLALRSIRCLRNVIHWNLITTFILRNVMWFLLQLVDHEVHESNEVWCRCITTIFNYFVV 223

Qy        199 TNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIPSPIIVTWAICKLFYENEQCWI 258
              ||||||||||||||||||||||::||| :||||||||| |||| ||| ||:|||||||
Db        224 TNFFWMFVEGCYLHTAIVMTYSTERLRKCLFLFIGWCIPFPIIVAWAIGKLYYENEQCWF 283

Qy        259 GKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLRASTTSETIQYRKAVKATLVLL 318
```

```
            |||||  :|||||| :|||||||||||||||||||||||||||||||||||||||||||||||
Db        284 GKEPGDLVDYIYQGPIILVLLINFVFLFNIVRILMTKLRASTTSETIQYRKAVKATLVLL 343

Qy        319 PLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFVSVFYCFLNGEVRSAARKRWHR 378
              |||||||||||||||||:|||:|||||||||||||||||||| |||||| ||||||
Db        344 PLLGITYMLFFVNPGEDDLSQIMFIYFNSFLQSFQGFFVSVFYCFFNGEVRSAVRKRWHR 403

Qy        379 WQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||||| :||||||||||||||||||||||||
Db        404 WQDHHSLRVPMARAMSIPTSPTRISFHSIKQTAAV 438


RESULT 13
US-08-981-189B-13
; Sequence 13, Application US/08981189B
; Patent No. 6214797
;  GENERAL INFORMATION:
;    APPLICANT:
;    TITLE OF INVENTION:  UROCORTIN PEPTIDES
;    NUMBER OF SEQUENCES:  19
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  FITCH, EVEN, TABIN & FLANNERY
;      STREET:  120 S. LaSalle Street, Suite 1600
;      CITY:  Chicago
;      STATE:  Illinois
;      COUNTRY:  USA
;      ZIP:  60603
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/981,189B
;      FILING DATE:  10-DEC-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/028,144
;      FILING DATE:  13-JUN-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/002,223
;      FILING DATE:  11-AUG-1995
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Schumann, James J.
;      REGISTRATION NUMBER:  20,856
;      REFERENCE/DOCKET NUMBER:  57611
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  858-552-1311
;      TELEFAX:  858-552-0095
;  INFORMATION FOR SEQ ID NO:  13:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  431 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
;    FEATURE:
;      NAME/KEY:  Protein
;      LOCATION:  1..431
;      OTHER INFORMATION:  /note= "Rat CRF-R2 Long Form"
;    PUBLICATION INFORMATION:
;      AUTHORS:  Lovenberg, Timothy W
;      AUTHORS:  Liaw, Chen W
;      AUTHORS:  Grigoriadis, Dimitri E
;      AUTHORS:  Clevenger, William
;      AUTHORS:  Chalmers, Derek T
;      AUTHORS:  DeSouza, Errol B
;      AUTHORS:  Oltersdorf, Tilman
;      TITLE:  Cloning and characterization of a
;      TITLE:  functionally distinct corticotropin-releasing
;      TITLE:  factor receptor subtype from rat brain
;      JOURNAL:  Proc. Natl. Acad. Sci. U.S.A.
;      VOLUME:  92
;      PAGES:  836-840
;      DATE:  January-1995

US-08-981-189B-13

  Query Match             80.1%;  Score 1784.5;  DB 3;  Length 431;
  Best Local Similarity   85.5%;  Pred. No. 5.5e-159;
  Matches  324;  Conservative   24;  Mismatches   28;  Indels    3;  Gaps    2;

Qy         38 FEGP--YCSATIDQIGTCWPRSLAGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASW 95
              | ||  ||: |:|||||||:|  | |||||||: ||||:|||||| |||| |||||||
Db         53 FSGPYSYCNTTLDQIGTCWPQSAPGALVERPCPEYFNGIKYNTTRNAYRECLENGTWASR 112

Qy         96 MNYSQCVPILDNK-RKYALHYKIALIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIH 154
              :||| | ||||:| ||| |||:|||||||||||:|::||| |||||| ||||||||||:||
Db        113 INYSHCEPILDDKQRKYDLHYRIALIINYLGHCVSVVALVAAFLLFLVLRSIRCLRNVIH 172

Qy        155 WNLITTFILRNIMWFLLQMIDHNIHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTA 214
              |||||||||||| |||||:||| :|| |||||||:|||:|||||||||||||||||||||
Db        173 WNLITTFILRNITWFLLQLIDHEVHEGNEVWCRCVTTIFNYFVVTNFFWMFVEGCYLHTA 232

Qy        215 IVMTYSTDKLRKWVFLFIGWCIPSPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRV 274
              |||||||: ||||:||||||||| |||| ||: ||:||||||| |||||  :|||||| :
Db        233 IVMTYSTEHLRKWLFLFIGWCIPCPIIVAWAVGKLYYENEQCWFGKEPGDLVDYIYQGPI 292

Qy        275 ILVLLINFVFLFNIVRILMTKLRASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGE 334
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        293 ILVLLINFVFLFNIVRILMTKLRASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGE 352

Qy        335 DDVSQIVFIYFNSFLQSFQGFFVSVFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMS 394
              ||:|||||||||||||||||||||||| |||||| ||||||||||:||| ||||||
Db        353 DDLSQIVFIYFNSFLQSFQGFFVSVFYCFFNGEVRSALRKRWHRWQDHHALRVPVARAMS 412

Qy        395 IPTSPTRISFHSIKQTAAV 413
              |||||||||||||||||||
Db        413 IPTSPTRISFHSIKQTAAV 431


RESULT 14
US-09-881-401-2
; Sequence 2, Application US/09881401
; Patent No. 6723841
;  GENERAL INFORMATION:
;       APPLICANT: Lovenberg, Timothy W.
;                  Oltersdorf, Tilman
;                  Liaw, Chen
;                  Grigoriadis, Dimitri E.
;                  Chalmers, Derek T.
;                  DeSouza, Errol B.
;       TITLE OF INVENTION: CORTICOTROPIN RELEASING FACTOR 2
;                           RECEPTORS
;       NUMBER OF SEQUENCES: 8
;       CORRESPONDENCE ADDRESS:
;            ADDRESSEE: Seed Intellectual Property Law Group
;            STREET: 701 Fifth Avenue, Suite 6300
;            CITY: Seattle
;            STATE: Washington
;            COUNTRY: USA
;            ZIP: 98104-7092
;       COMPUTER READABLE FORM:
;            MEDIUM TYPE: Floppy disk
;            COMPUTER: IBM PC compatible
;            OPERATING SYSTEM: PC-DOS/MS-DOS
;            SOFTWARE: PatentIn Release #1.0, Version #1.25
;       CURRENT APPLICATION DATA:
;            APPLICATION NUMBER: US/09/881,401
;            FILING DATE: 13-Jun-2001
;            CLASSIFICATION: <Unknown>
;       ATTORNEY/AGENT INFORMATION:
;            NAME: Christiansen, William T.
;            REGISTRATION NUMBER: 44,614
;            REFERENCE/DOCKET NUMBER: 690068.401C4
;       TELECOMMUNICATION INFORMATION:
;            TELEPHONE: (206) 622-4900
;            TELEFAX: (206) 682-6031
;  INFORMATION FOR SEQ ID NO: 2:
```

```
;       SEQUENCE CHARACTERISTICS:
;            LENGTH: 431 amino acids
;            TYPE: amino acid
;            TOPOLOGY: linear
;       MOLECULE TYPE: protein
;       SEQUENCE DESCRIPTION: SEQ ID NO: 2:
US-09-881-401-2

  Query Match             80.1%;  Score 1784.5;  DB 4;  Length 431;
  Best Local Similarity   85.5%;  Pred. No. 5.5e-159;
  Matches  324;  Conservative   24;  Mismatches   28;  Indels    3;  Gaps    2;

Qy         38 FEGP--YCSATIDQIGTCWPRSLAGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASW 95
              | ||  ||: |:||||||||:|  | |||||||: ||||:|||||| |||| |||||||
Db         53 FSGPYSYCNTTLDQIGTCWPQSAPGALVERPCPEYFNGIKYNTTRNAYRECLENGTWASR 112

Qy         96 MNYSQCVPILDNK-RKYALHYKIALIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIH 154
              :||| | ||||:| ||| |||:||||||||||||:|::||| |||||| |||||||||:||
Db        113 INYSHCEPILDDKQRKYDLHYRIALIINYLGHCVSVVALVAAFLLFLVLRSIRCLRNVIH 172

Qy        155 WNLITTFILRNIMWFLLQMIDHNIHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTA 214
              |||||||||||| ||||:||| :|| |||||||:|||:|||||||||||||||||||||
Db        173 WNLITTFILRNITWFLLQLIDHEVHEGNEVWCRCVTTIFNYFVVTNFFWMFVEGCYLHTA 232

Qy        215 IVMTYSTDKLRKWVFLFIGWCIPSPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRV 274
              |||||||: ||||:||||||||| |||| ||: ||:||||||| |||||  :|||||| :
Db        233 IVMTYSTEHLRKWLFLFIGWCIPCPIIVAWAVGKLYYENEQCWFGKEPGDLVDYIYQGPI 292

Qy        275 ILVLLINFVFLFNIVRILMTKLRASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGE 334
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        293 ILVLLINFVFLFNIVRILMTKLRASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGE 352

Qy        335 DDVSQIVFIYFNSFLQSFQGFFVSVFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMS 394
              ||:|||||||||||||||||||||||||| ||||||| ||||||||||:||| ||||||
Db        353 DDLSQIVFIYFNSFLQSFQGFFVSVFYCFFNGEVRSALRKRWHRWQDHHALRVPVARAMS 412

Qy        395 IPTSPTRISFHSIKQTAAV 413
              ||||||||||||||||||
Db        413 IPTSPTRISFHSIKQTAAV 431


RESULT 15
US-08-381-433A-2
; Sequence 2, Application US/08381433A
; Patent No. 5786203
;  GENERAL INFORMATION:
;    APPLICANT:  Lovenberg, Timothy W.
;    APPLICANT:  Oltersdorf, Tilman
;    APPLICANT:  Liaw, Chen
;    APPLICANT:  Grigoriadis, Dimitri E.
;    APPLICANT:  DeSouza, Errol B.
;    TITLE OF INVENTION:  CORTICOTROPIN RELEASING FACTOR 2
;    TITLE OF INVENTION:  RECEPTORS
;    NUMBER OF SEQUENCES:  8
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  SEED and BERRY
;      STREET:  6300 Columbia Center, 701 Fifth Avenue
;      CITY:  Seattle
;      STATE:  Washington
;      COUNTRY:  USA
;      ZIP:  98104-7092
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/381,433A
;      FILING DATE:  31-JAN-1995
;    • CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  McMasters, David D.
;      REGISTRATION NUMBER:  33,963
;      REFERENCE/DOCKET NUMBER:  690068.401C1
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (206) 622-4900
;      TELEFAX:  (206) 682-6031
;      TELEX:  3723836 SEEDANDBERRY
;  INFORMATION FOR SEQ ID NO:  2:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  431 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-381-433A-2

  Query Match             79.8%;  Score 1778.5;  DB 1;  Length 431;
  Best Local Similarity   85.2%;  Pred. No. 2e-158;
  Matches  323;  Conservative   24;  Mismatches   29;  Indels    3;  Gaps    2;

Qy         38 FEGP--YCSATIDQIGTCWPRSLAGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASW 95
              | ||  ||: |:||||||||:|  | |||||||: ||||:|||||| |||| |||||||
Db         53 FSGPYSYCNTTLDQIGTCWPQSAPGALVERPCPEYFNGIKYNTTRNAYRECLENGTWASR 112

Qy         96 MNYSQCVPILDNK-RKYALHYKIALIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIH 154
              :||| | ||||:| ||| |||:||||||||||||:|::||| |||||| |||||||||:||
Db        113 INYSHCEPILDDKQRKYDLHYRIALIINYLGHCVSVVALVAAFLLFLVLRSIRCLRNVIH 172

Qy        155 WNLITTFILRNIMWFLLQMIDHNIHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTA 214
              |||||||||||| |||||:||| :|| |||||||:|||:|||||| ||||||||||||
Db        173 WNLITTFILRNITWFLLQLIDHEVHEGNEVWCRCVTTIFNYFVVTKFFWMFVEGCYLHTA 232

Qy        215 IVMTYSTDKLRKWVFLFIGWCIPSPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRV 274
              |||||||: ||||:||||||||| |||| ||: ||:||||||| |||||  :|||||| :
Db        233 IVMTYSTEHLRKWLFLFIGWCIPCPIIVAWAVGKLYYENEQCWFGKEPGDLVDYIYQGPI 292

Qy        275 ILVLLINFVFLFNIVRILMTKLRASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGE 334
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        293 ILVLLINFVFLFNIVRILMTKLRASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGE 352

Qy        335 DDVSQIVFIYFNSFLQSFQGFFVSVFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMS 394
              ||:|||||||||||||||||||||||||| ||||||| ||||||||||:||| ||||||
Db        353 DDLSQIVFIYFNSFLQSFQGFFVSVFYCFFNGEVRSALRKRWHRWQDHHALRVPVARAMS 412

Qy        395 IPTSPTRISFHSIKQTAAV 413
              ||||||||||||||||||
Db        413 IPTSPTRISFHSIKQTAAV 431


Search completed: August 20, 2005, 00:38:08
Job time : 45 secs
```

GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: August 20, 2005, 00:09:52 ; Search time 166 Seconds
(without alignments)
962.241 Million cell updates/sec

Title: US-10-649-852-32
Perfect score: 2229
Sequence: 1 MDSTIFEIIIDEFDANCSLL.....SIPTSPTRISFHSIKQTAAV 413

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2105692 seqs, 386760381 residues

Total number of hits satisfying chosen parameters: 2105692

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_16Dec04:*
1: geneseqp1980s:*
2: geneseqp1990s:*
3: geneseqp2000s:*
4: geneseqp2001s:*
5: geneseqp2002s:*
6: geneseqp2003as:*
7: geneseqp2003bs:*
8: geneseqp2004s:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	2229	100.0	413	5	AAO19435	Aao19435 Xenopus c
2	2229	100.0	413	8	ADO50813	Ado50813 Frog cort
3	1807	81.1	405	5	AAO19438	Aao19438 Fish cort
4	1807	81.1	405	8	ADO50819	Ado50819 Brown bul
5	1804	80.9	411	2	AAW16481	Aaw16481 Human cor
6	1804	80.9	411	4	AAB71867	Aab71867 Human CRF
7	1804	80.9	411	7	ADC86183	Adc86183 Human GPC
8	1804	80.9	411	8	ADO29267	Ado29267 Human GPC
9	1799	80.7	411	2	AAR90576	Aar90576 Human CRF
10	1799	80.7	411	5	AAO19424	Aao19424 Human cor
11	1799	80.7	411	6	ABP81806	Abp81806 Human cor
12	1799	80.7	411	8	ADO50791	Ado50791 Human cor
13	1799	80.7	411	8	ADQ89168	Adq89168 Human uro
14	1793	80.4	411	2	ABU62363	Abu62363 Rat corti
15	1793	80.4	411	5	AAO19428	Aao19428 Rat corti
16	1793	80.4	411	8	ADO50799	Ado50799 Rat corti
17	1790	80.3	411	2	AAR90574	Aar90574 Rat CRF2-
18	1787.5	80.2	397	5	AAO19426	Aao19426 Human cor
19	1787.5	80.2	397	8	ADO50795	Ado50795 Human cor
20	1786	80.1	438	5	AAO19425	Aao19425 Human cor
21	1786	80.1	438	8	ADO50793	Ado50793 Human cor
22	1784.5	80.1	431	2	ABU62364	Abu62364 Rat corti
23	1776.5	79.7	431	2	AAR90575	Aar90575 Rat CRF2-
24	1776.5	79.7	431	5	AAO19429	Aao19429 Rat corti
25	1776.5	79.7	431	8	ADO50801	Ado50801 Rat corti
26	1770.5	79.4	431	2	AAR97293	Aar97293 Mouse CRF
27	1770.5	79.4	431	2	ABU62362	Abu62362 Mouse cor
28	1770.5	79.4	431	5	AAE26683	Aae26683 Mouse CRF
29	1770.5	79.4	431	5	AAO19431	Aao19431 Murine co
30	1770.5	79.4	431	6	ABU08079	Abu08079 Mouse cor
31	1770.5	79.4	431	6	ABG76050	Abg76050 Mouse cor
32	1770.5	79.4	431	8	ADJ65805	Adj65805 Mouse cor
33	1770.5	79.4	431	8	ADO29268	Ado29268 Mouse GPC
34	1770.5	79.4	431	8	ADO50805	Ado50805 mouse cor
35	1769	79.4	430	5	AAO19432	Aao19432 Murine co
36	1769	79.4	430	8	ADO50807	Ado50807 mouse cor
37	1582.5	71.0	428	5	AAO19437	Aao19437 Fish cort
38	1582.5	71.0	428	8	ADO50817	Ado50817 Catfish c
39	1582	71.0	420	5	AAO19440	Aao19440 Chicken c
40	1582	71.0	420	8	ADO50823	Ado50823 Chicken c
41	1578.5	70.8	445	5	AAO19436	Aao19436 Fish cort
42	1578.5	70.8	445	8	ADO50815	Ado50815 Catfish c
43	1566	70.3	415	2	AAR69519	Aar69519 Human pit
44	1566	70.3	415	2	AAR97290	Aar97290 Human CRF
45	1566	70.3	415	2	AAW00159	Aaw00159 Human cor

ALIGNMENTS

RESULT 1
AAO19435
ID AAO19435 standard; protein; 413 AA.
XX
AC AAO19435;
XX
DT 10-DEC-2002 (first entry)
XX
DE Xenopus corticotrophin releasing factor receptor CRF2R.
XX
KW Human; rat; mouse; sheep; cow; chicken; CRF1R; CRF2R;
KW skeletal muscle atrophy; corticotrophin releasing factor-2 receptor;
KW muscular dystrophy; corticotrophin releasing factor-1 receptor;
KW gene therapy.
XX
OS Xenopus laevis.
XX
PN WO200269908-A2.
XX
PD 12-SEP-2002.
XX
PF 06-MAR-2002; 2002WO-US007476.
XX
PR 06-MAR-2001; 2001US-00799978.
XX
PA (PROC) PROCTER & GAMBLE CO.
XX
PI Isfort RJ, Sheldon RJ;
XX
DR WPI; 2002-713413/77.
DR N-PSDB; AAL49986.
XX
PT Identifying candidate compounds for regulating skeletal muscle mass or
PT treating skeletal muscle atrophy by identifying test compounds that bind
PT to, or activate, the corticotropin releasing factor-2 receptor.
XX
PS Claim 7; Page 142-143; 167pp; English.
XX
CC The present invention relates to a method of identifying candidate
CC compounds for regulating skeletal muscle mass or function, and comprises
CC contacting a test compound with a corticotropin releasing factor-2
CC receptor (CRF2R) or with a cell expressing a functional CRF2R,
CC determining whether the test compound binds to, or activates, the CRF2R
CC and identifying the test compounds that bind to, or activates, the CRF2R
CC as candidate compounds for regulating skeletal muscle mass or function.
CC The method is useful for preparing a medicament for treating skeletal
CC muscle atrophy or for prophylactic treatment of muscular dystrophies. The
CC present sequence is a corticotrophin releasing factor receptor

```
XX
SQ   Sequence 413 AA;

  Query Match             100.0%;  Score 2229;  DB 5;  Length 413;
  Best Local Similarity   100.0%;  Pred. No. 6.9e-217;
  Matches  413;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGPYCSATIDQIGTCWPRSLAG 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGPYCSATIDQIGTCWPRSLAG 60

Qy         61 ELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNKRKYALHYKIALI 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 ELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNKRKYALHYKIALI 120

Qy        121 INYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHNIHE 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 INYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHNIHE 180

Qy        181 SNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIPSPI 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIPSPI 240

Qy        241 IVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLRAST 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 IVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLRAST 300

Qy        301 TSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFVSVF 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFVSVF 360

Qy        361 YCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 YCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413


RESULT 2
ADO50813
ID   ADO50813 standard; protein; 413 AA.
XX
AC   ADO50813;
XX
DT   12-AUG-2004  (first entry)
XX
DE   Frog corticotropin releasing factor receptor 2, CRF2R.
XX
KW   Frog; receptor; corticotropin releasing factor receptor; CRF1R; CRF2R;
KW   skeletal muscle; muscle atrophy; skeletal muscle dystrophy;
KW   skeletal muscle hypertrophy; surgery; bed rest; broken bone;
KW   infectious disease; AIDS cachexia.
XX
OS   Xenopus laevis.
XX
PN   US2004101911-A1.
XX
PD   27-MAY-2004.
XX
PF   27-AUG-2003; 2003US-00649852.
XX
PR   06-MAR-2001; 2001US-00799978.
XX
PA   (PROC ) PROCTER & GAMBLE CO.
XX
PI   Isfort RJ,  Sheldon RJ;
XX
DR   WPI; 2004-459890/43.
DR   N-PSDB; ADO50812.
XX
PT   Identifying compounds for regulating skeletal muscle mass or function, by
PT   contacting test compound with vertebrate corticotropin releasing factor2
PT   receptors (CRF2R), selecting compounds that bind or activate CRF2R.
XX
PS   Claim 3; SEQ ID NO 32; 100pp; English.
XX
CC   The invention relates to identifying candidate compounds for regulating
CC   skeletal muscle mass or function, comprising contacting a test compound
CC   with vertebrate corticotropin releasing factor 2 receptors (CRF 2 R),
CC   determining if the compound binds to or activates CRF2R, selecting
CC   compounds that bind or activate CRF 2 R, and determining if compound
CC   increases muscle mass or function in muscle atrophy model. Also included
CC   are identifying candidate therapeutic compounds from a group of one or
CC   more candidate compounds which have been previously determined to bind to
CC   or activate a vertebrate CRF 2 R (comprising administering the candidate
CC   compound to a non-human animal and determining whether the candidate
CC   compound regulates skeletal muscle mass or function in the treated
CC   animal), increasing skeletal muscle mass or function in a subject in
CC   which such an increase is desirable (comprising identifying a subject in
CC   which an increase in muscle mass or function is desirable and
CC   administering to the subject a safe and effective amount of a CRF 2 R
CC   agonist), a purified antibody specific for a CRF2R (where the antibody is
CC   a chimaeric or human antibody), and a pharmaceutical composition
CC   comprising a safe and effective amount of a CRF2R agonist and carrier.
CC   The methods are useful for identifying candidate compounds for regulating
CC   skeletal muscle mass or function, for increasing skeletal muscle mass or
CC   function (in a subject in which an increase is desirable), for
CC   identifying candidate compounds that are potentially useful in the
CC   treatment of skeletal muscle dystrophy and for identifying compounds that
CC   prolong or augment the agonist-induced activation of CRF2R or of a CRF2R
CC   signal transduction pathway. The compound is useful for treating skeletal
CC   muscle hypertrophy and for modulating skeletal muscle atrophy induced by
CC   e.g. surgery, bed rest, broken bones, infectious disease or AIDS
CC   cachexia. The present sequence represents a corticotropin releasing
CC   factor receptor.
XX
SQ   Sequence 413 AA;

  Query Match             100.0%;  Score 2229;  DB 8;  Length 413;
  Best Local Similarity   100.0%;  Pred. No. 6.9e-217;
  Matches  413;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGPYCSATIDQIGTCWPRSLAG 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGPYCSATIDQIGTCWPRSLAG 60

Qy         61 ELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNKRKYALHYKIALI 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 ELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNKRKYALHYKIALI 120

Qy        121 INYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHNIHE 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 INYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHNIHE 180

Qy        181 SNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIPSPI 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 SNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIPSPI 240

Qy        241 IVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLRAST 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 IVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLRAST 300

Qy        301 TSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFVSVF 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFVSVF 360

Qy        361 YCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 YCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413


RESULT 3
AAO19438
ID   AAO19438 standard; protein; 405 AA.
XX
AC   AAO19438;
XX
DT   10-DEC-2002  (first entry)
```

```
XX
DE   Fish corticotrophin releasing factor receptor CRF2R.
XX
KW   Human; rat; mouse; sheep; cow; chicken; CRF1R; CRF2R;
KW   skeletal muscle atrophy; corticotrophin releasing factor-2 receptor;
KW   muscular dystrophy; corticotrophin releasing factor-1 receptor;
KW   gene therapy.
XX
OS   Ameiurus nebulosus.
XX
PN   WO200269908-A2.
XX
PD   12-SEP-2002.
XX
PF   06-MAR-2002; 2002WO-US007476.
XX
PR   06-MAR-2001; 2001US-00799978.
XX
PA   (PROC ) PROCTER & GAMBLE CO.
XX
PI   Isfort RJ,  Sheldon RJ;
XX
DR   WPI; 2002-713413/77.
DR   N-PSDB; AAL49989.
XX
PT   Identifying candidate compounds for regulating skeletal muscle mass or
PT   treating skeletal muscle atrophy by identifying test compounds that bind
PT   to, or activate, the corticotropin releasing factor-2 receptor.
XX
PS   Claim 7; Page 154-156; 167pp; English.
XX
CC   The present invention relates to a method of identifying candidate
CC   compounds for regulating skeletal muscle mass or function, and comprises
CC   contacting a test compound with a corticotropin releasing factor-2
CC   receptor (CRF2R) or with a cell expressing a functional CRF2R,
CC   determining whether the test compound binds to, or activates, the CRF2R
CC   and identifying the test compounds that bind to, or activates, the CRF2R
CC   as candidate compounds for regulating skeletal muscle mass or function.
CC   The method is useful for preparing a medicament for treating skeletal
CC   muscle atrophy or for prophylactic treatment of muscular dystrophies. The
CC   present sequence is a corticotrophin releasing factor receptor
XX
SQ   Sequence 405 AA;

  Query Match             81.1%;  Score 1807;  DB 5;  Length 405;
  Best Local Similarity   79.9%;  Pred. No. 4e-174;
  Matches  330;  Conservative   33;  Mismatches   42;  Indels    8;  Gaps    2;

Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGPYCSATIDQIGTCWPRSLAG 60
              |: :: |::    : |||| ||| |    : | :       ||:|| |:||||||| ||
Db          1 MEVSLLELL--SVEVNCSLADAFGDPAYGNASDAL------YCNATADEIGTCWPRSGAG 52

Qy         61 ELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNKRKYALHYKIALI 120
               :| |||||  ||::||:||: |||| ||||||  :||| | |||: |||| :|||||||
Db         53 RVVARPCPDFINGVKYNSTRSAYRECLENGTWAFKINYSSCEPILEEKRKYPVHYKIALI 112

Qy        121 INYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHNIHE 180
              |||||||||: |||||:|||||||||||||:|||||||||||||||| |||:|||||||
Db        113 INYLGHCISVGALVIAFVLFLCLRSIRCLRNVIHWNLITTFILRNIMWLLLQLIDHNIHE 172

Qy        181 SNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIPSPI 240
              || ||| |||:|||||||||||||||||||||||||||||||||||||||||||||||| |:
Db        173 RNEPWCRLITTVYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIPCPV 232

Qy        241 IVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLRAST 300
              |: ||: ||: |||||| |||||||:|||||| ||:|||||||||||||||||||||||
Db        233 IIAWAVGKLYNENEQCWFGKEPGKYVDYIYQGPVIVVLLINFVFLFNIVRILMTKLRAST 292

Qy        301 TSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFVSVF 360
              ||||||||||||||||||||||||||||||:||:|||||||||||||||||||||||||
Db        293 TSETIQYRKAVKATLVLLPLLGITYMLFFVNPGDDDISQIVFIYFNSFLQSFQGFFVSVF 352

Qy        361 YCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||||||| |||||||||:|:|||||||||||||||||||||||| | ||
Db        353 YCFLNGEVRSAVRKRWHRWQDNHALRVRVARAMSIPTSPTRISFHSIKHTTAV 405


RESULT 4
ADO50819
ID   ADO50819 standard; protein; 405 AA.
XX
AC   ADO50819;
XX
DT   12-AUG-2004  (first entry)
XX
DE   Brown bullhead catfish corticotropin releasing factor receptor 2, CRF2R.
XX
KW   Brown bullhead catfish; receptor;
KW   corticotropin releasing factor receptor; CRF1R; CRF2R; skeletal muscle;
KW   muscle atrophy; skeletal muscle dystrophy; skeletal muscle hypertrophy;
KW   surgery; bed rest; broken bone; infectious disease; AIDS cachexia.
XX
OS   Ameiurus nebulosus.
XX
PN   US2004101911-A1.
XX
PD   27-MAY-2004.
XX
PF   27-AUG-2003; 2003US-00649852.
XX
PR   06-MAR-2001; 2001US-00799978.
XX
PA   (PROC ) PROCTER & GAMBLE CO.
XX
PI   Isfort RJ,  Sheldon RJ;
XX
DR   WPI; 2004-459890/43.
DR   N-PSDB; ADO50818.
XX
PT   Identifying compounds for regulating skeletal muscle mass or function, by
PT   contacting test compound with vertebrate corticotropin releasing factor2
PT   receptors (CRF2R), selecting compounds that bind or activate CRF2R.
XX
PS   Claim 3; SEQ ID NO 38; 100pp; English.
XX
CC   The invention relates to identifying candidate compounds for regulating
CC   skeletal muscle mass or function, comprising contacting a test compound
CC   with vertebrate corticotropin releasing factor 2 receptors (CRF 2 R),
CC   determining if the compound binds to or activates CRF2R, selecting
CC   compounds that bind or activate CRF 2 R, and determining if compound
CC   increases muscle mass or function in muscle atrophy model. Also included
CC   are identifying candidate therapeutic compounds from a group of one or
CC   more candidate compounds which have been previously determined to bind to
CC   or activate a vertebrate CRF 2 R (comprising administering the candidate
CC   compound to a non-human animal and determining whether the candidate
CC   compound regulates skeletal muscle mass or function in the treated
CC   animal), increasing skeletal muscle mass or function in a subject in
CC   which such an increase is desirable (comprising identifying a subject in
CC   which an increase in muscle mass or function is desirable and
CC   administering to the subject a safe and effective amount of a CRF 2 R
CC   agonist), a purified antibody specific for a CRF2R (where the antibody is
CC   a chimaeric or human antibody), and a pharmaceutical composition
CC   comprising a safe and effective amount of a CRF2R agonist and carrier.
CC   The methods are useful for identifying candidate compounds for regulating
CC   skeletal muscle mass or function, for increasing skeletal muscle mass or
CC   function (in a subject in which an increase is desirable), for
CC   identifying candidate compounds that are potentially useful in the
CC   treatment of skeletal muscle dystrophy and for identifying compounds that
CC   prolong or augment the agonist-induced activation of CRF2R or of a CRF2R
CC   signal transduction pathway. The compound is useful for treating skeletal
CC   muscle hypertrophy and for modulating skeletal muscle atrophy induced by
CC   e.g. surgery, bed rest, broken bones, infectious disease or AIDS
CC   cachexia. The present sequence represents a corticotropin releasing
CC   factor receptor.
XX
SQ   Sequence 405 AA;
```

```
  Query Match             81.1%;  Score 1807;  DB 8;  Length 405;
  Best Local Similarity   79.9%;  Pred. No. 4e-174;
  Matches  330;  Conservative   33;  Mismatches   42;  Indels    8;  Gaps    2;

Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGPYCSATIDQIGTCWPRSLAG 60
              |: :: |::    : |||| ||| |    : | :       ||:|| |:||||||| ||
Db          1 MEVSLLELL--SVEVNCSLADAFGDPAYGNASDAL------YCNATADEIGTCWPRSGAG 52

Qy         61 ELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNKRKYALHYKIALI 120
               :| |||||  ||::||:||: |||| ||||||  :||| | |||: |||| :|||||||
Db         53 RVVARPCPDFINGVKYNSTRSAYRECLENGTWAFKINYSSCEPILEEKRKYPVHYKIALI 112

Qy        121 INYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHNIHE 180
              |||||||||: ||||||:|||||||||||||:|||||||||||||||| |||:|||||||
Db        113 INYLGHCISVGALVIAFVLFLCLRSIRCLRNVIHWNLITTFILRNIMWLLLQLIDHNIHE 172

Qy        181 SNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIPSPI 240
              || ||| |||:|||||||||||||||||||||||||||||||||||||||||||||||| |:
Db        173 RNEPWCRLITTVYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIPCPV 232

Qy        241 IVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLRAST 300
              |: ||: ||: |||||| |||||||:|||||| ||:||||||||||||||||||||||||
Db        233 IIAWAVGKLYNENEQCWFGKEPGKYVDYIYQGPVIVVLLINFVFLFNIVRILMTKLRAST 292

Qy        301 TSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFVSVF 360
              ||||||||||||||||||||||||||||||:||:|||||||||||||||||||||||||||
Db        293 TSETIQYRKAVKATLVLLPLLGITYMLFFVNPGDDDISQIVFIYFNSFLQSFQGFFVSVF 352

Qy        361 YCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||||||||| |||||||||:|:|||||||||||||||||||||||||| | ||
Db        353 YCFLNGEVRSAVRKRWHRWQDNHALRVRVARAMSIPTSPTRISFHSIKHTTAV 405
```

RESULT 5
AAW16481
ID AAW16481 standard; protein; 411 AA.
XX
AC AAW16481;
XX
DT 20-JUN-1997 (first entry)
XX
DE Human corticotrophin releasing factor 2 receptor protein.
XX
KW Human; corticotrophin; corticotropin; releasing factor 2; CRF2; receptor;
KW screen; agonist; antagonist; activation; inhibition; prevention;
KW treatment; dementia; obesity; acceleration; stress adaptation;
KW melancholia; anxiety; stress headache; AIDS;
KW acquired immunodeficiency syndrome; Alzheimer's disease;
KW gastrointestinal disorder.
XX
OS Homo sapiens.
XX
PN JP09070289-A.
XX
PD 18-MAR-1997.
XX
PF 14-SEP-1995; 95JP-00237081.
XX
PR 27-JUN-1995; 95JP-00161213.
XX
PA (TAKE) TAKEDA CHEM IND LTD.
XX
DR WPI; 1997-230023/21.
DR N-PSDB; AAT66508.
XX
PT PCR primer for G protein conjugate type receptor protein DNA - and human
PT corticotropin releasing factor 2 receptor protein, useful to screen for
PT agonists and antagonists to treat dementia and anxiety.
XX
PS Claim 8; Page 39-40; 46pp; Japanese.
XX
CC The present sequence is the human corticotrophin releasing factor 2
CC (CRF2) receptor protein, which can be used to screen for an agonist or
CC antagonist which activates the receptor, or competitively inhibits the
CC binding of the receptor to CRF. The agonist can be used to prevent or
CC treat dementia and obesity, or accelerate stress adaptation. The
CC antagonist can be used to prevent or treat melancholia, anxiety, stress
CC headaches, AIDS, Alzheimer's disease or gastrointestinal disorders
XX
SQ Sequence 411 AA;

```
  Query Match             80.9%;  Score 1804;  DB 2;  Length 411;
  Best Local Similarity   80.0%;  Pred. No. 8.3e-174;
  Matches  333;  Conservative   33;  Mismatches   42;  Indels    8;  Gaps    4;

Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGP--YCSATIDQIGTCWPRSL 58
              ||: :   ::   :|||||  |  :  |         |||  ||: |:||||||||||
Db          1 MDAALLHSLL---EANCSL--ALAEELLLDGWGPPLDPEGPYSYCNTTLDQIGTCWPRSA 55

Qy         59 AGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNK-RKYALHYKI 117
              || ||||||: |||::|||||| |||| ||||||| :||||| ||||:| ||| |||:|
Db         56 AGALVERPCPEYFNGVKYNTTRNAYRECLENGTWASKINYSQCEPILDDKQRKYDLHYRI 115

Qy        118 ALIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHN 177
              ||::||||||:|: ||| |||||| |||||||||:|||||||||||||:||||||::||
Db        116 ALVVNYLGHCVSVAALVAAFLLFLALRSIRCLRNVIHWNLITTFILRNVMWFLLQLVDHE 175

Qy        178 IHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIP 237
              :|||||||||||||:|||||||||||||||||||||||||::||| :|||||||||
Db        176 VHESNEVWCRCITTIFNYFVVTNFFWMFVEGCYLHTAIVMTYSTERLRKCLFLFIGWCIP 235

Qy        238 SPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLR 297
              |||| ||| ||:||||||| |||||  :|||||| :|||||||||||||||||||||||
Db        236 FPIIVAWAIGKLYYENEQCWFGKEPGDLVDYIYQGPIILVLLINFVFLFNIVRILMTKLR 295

Qy        298 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFV 357
              |||||||||||||||||||||||||||||||||||:|||:|||||||||||||||||||
Db        296 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDLSQIMFIYFNSFLQSFQGFFV 355

Qy        358 SVFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||| ||||||| |||||||||||||| :|||||||||||||||||||||||||
Db        356 SVFYCFFNGEVRSAVRKRWHRWQDHHSLRVPMARAMSIPTSPTRISFHSIKQTAAV 411
```

RESULT 6
AAB71867
ID AAB71867 standard; protein; 411 AA.
XX
AC AAB71867;
XX
DT 03-MAY-2001 (first entry)
XX
DE Human CRF2 seven transmembrane domain.
XX
KW Human; CRF2; corticotropin releasing factor receptor 2; h15571;
KW immunomodulatory; vascular; hepatic; antiasthma; anitmicrobial;
KW antiinflammatory; immunosuppressive; gene therapy; vaccine;
KW G-protein coupled receptor; GPCR; liver fibrosis; respiratory disorder;
KW infection; chronic inflammatory disease; organ-specific autoimmunity;
KW graft rejection; cystic fibrosis.
XX
OS Homo sapiens.
XX
PN WO200109328-A1.
XX
PD 08-FEB-2001.
XX
PF 03-AUG-2000; 2000WO-US021278.
XX
PR 03-AUG-1999; 99US-0146916P.
PR 29-FEB-2000; 2000US-00515781.
XX
PA (MILL-) MILLENNIUM PHARM INC.
XX
PI Hodge MR, Lloyd C, Weich NS;

```
XX
DR   WPI; 2001-138653/14.
XX
PT   Nucleic acids encoding a G-prot. coupled receptor polypeptides, useful
PT   for preventing, diagnosing and treating, e.g. liver fibrosis and asthma.
XX
PS   Disclosure; Fig 2; 145pp; English.
XX
CC   The present sequence is a human G-protein coupled receptor (GPCR) used
CC   for comparison with the seven transmembrane domain of a novel GPCR
CC   designated h15571. h15571 GPCR polynucleotides and polypeptides may be
CC   used in the prevention, treatment and diagnosis of diseases associated
CC   with inappropriate GPCR expression. Such diseases includes immune,
CC   haematological, fibrotic, hepatic and respiratory disorders including
CC   asthma, allergies (e.g. allergic rhinitis and psoriasis), pathogenic
CC   infections, chronic inflammatory diseases, organ-specific autoimmunity,
CC   graft rejection, graft versus host disease, cystic fibrosis and, in
CC   particular, liver fibrosis. The GPCR polypeptides may be used as antigens
CC   in the production of antibodies against GPCR and in assays to identify
CC   modulators (agonists and antagonists) of GPCR expression and activity.
CC   The anti-GPCR antibodies and GPCR antagonists may also be used to down
CC   regulate GPCR expression and activity. The anti-GPCR antibodies may be
CC   used as diagnostic agents for detecting the presence of GPCR polypeptides
CC   in samples
XX
SQ   Sequence 411 AA;

  Query Match           80.9%;  Score 1804;  DB 4;  Length 411;
  Best Local Similarity  80.0%;  Pred. No. 8.3e-174;
  Matches  333;  Conservative   33;  Mismatches   42;  Indels    8;  Gaps    4;

Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGP--YCSATIDQIGTCWPRSL 58
              ||: :   ::   :|||||  |  :  |        |||  ||: |:||||||||||
Db          1 MDAALLHSLL---EANCSL--ALAEELLLDGWGPPLDPEGPYSYCNTTLDQIGTCWPRSA 55

Qy         59 AGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNK-RKYALHYKI 117
              || |||||||: |||::|||||| |||| ||||||| :||||| ||||:| ||| |||:|
Db         56 AGALVERPCPEYFNGVKYNTTRNAYRECLENGTWASKINYSQCEPILDDKQRKYDLHYRI 115

Qy        118 ALIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHN 177
              ||::||||||:|: ||| |||||| |||||||||:|||||||||||||:||||||::||
Db        116 ALVVNYLGHCVSVAALVAAFLLFLALRSIRCLRNVIHWNLITTFILRNVMWFLLQLVDHE 175

Qy        178 IHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIP 237
              :|||||||||||||:|||||||||||||||||||||||||::||| :|||||||||
Db        176 VHESNEVWCRCITTIFNYFVVTNFFWMFVEGCYLHTAIVMTYSTERLRKCLFLFIGWCIP 235

Qy        238 SPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLR 297
              |||| ||| ||:|||||| |||||  :|||||| :|||||||||||||||||||||||
Db        236 FPIIVAWAIGKLYYENEQCWFGKEPGDLVDYIYQGPIILVLLINFVFLFNIVRILMTKLR 295

Qy        298 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFV 357
              |||||||||||||||||||||||||||||||||||||:|||:|||||||||||||||||
Db        296 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDLSQIMFIYFNSFLQSFQGFFV 355

Qy        358 SVFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||| ||||||| |||||||||||||| :|||||||||||||||||||||||
Db        356 SVFYCFFNGEVRSAVRKRWHRWQDHHSLRVPMARAMSIPTSPTRISFHSIKQTAAV 411


RESULT 7
ADC86183
ID   ADC86183 standard; protein; 411 AA.
XX
AC   ADC86183;
XX
DT   01-JAN-2004  (first entry)
XX
DE   Human GPCR protein SEQ ID NO:636.
XX
KW   human; GPCR; guanosine triphosphate-binding protein coupled receptor;
KW   gene therapy.
XX
OS   Homo sapiens.
XX
PN   EP1270724-A2.
XX
PD   02-JAN-2003.
XX
PF   18-JUN-2002; 2002EP-00013517.
XX
PR   18-JUN-2001; 2001JP-00246789.
XX
PA   (NAAD-) NAT INST ADVANCED IND SCI & TECHNOLOGY.
PA   (ADSC-) CENT ADVANCED SCI & TECHNOLOGY INCUBATIO.
XX
PI   Suwa M,  Asai K,  Akiyama Y,  Aburatani H;
XX
DR   WPI; 2003-315783/31.
DR   N-PSDB; ADC86182.
XX
PT   New polynucleotide, useful for preparing a composition for treating a
PT   patient in need of increased or suppressed activity or expression of the
PT   guanosine triphosphate-binding protein coupled receptor.
XX
PS   Claim 2; SEQ ID NO 636; 28pp; English.
XX
CC   The invention relates to a novel polynucleotide encoding a guanosine
CC   triphosphate-binding protein coupled receptor (GPCR). A polynucleotide of
CC   the invention may have a use in gene therapy. The polynucleotide and
CC   polypeptide are useful for preparing a composition for treating a patient
CC   in need of increased or suppressed activity or expression of the
CC   guanosine triphosphate-binding protein coupled receptor. The protein
CC   sequences shown in ADC85549-ADC87617 represent GPCR's of the invention.
XX
SQ   Sequence 411 AA;

  Query Match           80.9%;  Score 1804;  DB 7;  Length 411;
  Best Local Similarity  80.0%;  Pred. No. 8.3e-174;
  Matches  333;  Conservative   33;  Mismatches   42;  Indels    8;  Gaps    4;

Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGP--YCSATIDQIGTCWPRSL 58
              ||: :   ::   :|||||  |  :  |        |||  ||: |:||||||||||
Db          1 MDAALLHSLL---EANCSL--ALAEELLLDGWGPPLDPEGPYSYCNTTLDQIGTCWPRSA 55

Qy         59 AGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNK-RKYALHYKI 117
              || |||||||: |||::|||||| |||| ||||||| :||||| ||||:| ||| |||:|
Db         56 AGALVERPCPEYFNGVKYNTTRNAYRECLENGTWASKINYSQCEPILDDKQRKYDLHYRI 115

Qy        118 ALIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHN 177
              ||::||||||:|: ||| |||||| |||||||||:|||||||||||||:||||||::||
Db        116 ALVVNYLGHCVSVAALVAAFLLFLALRSIRCLRNVIHWNLITTFILRNVMWFLLQLVDHE 175

Qy        178 IHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIP 237
              :|||||||||||||:|||||||||||||||||||||||||::||| :|||||||||
Db        176 VHESNEVWCRCITTIFNYFVVTNFFWMFVEGCYLHTAIVMTYSTERLRKCLFLFIGWCIP 235

Qy        238 SPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLR 297
              |||| ||| ||:|||||| |||||  :|||||| :|||||||||||||||||||||||
Db        236 FPIIVAWAIGKLYYENEQCWFGKEPGDLVDYIYQGPIILVLLINFVFLFNIVRILMTKLR 295

Qy        298 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFV 357
              |||||||||||||||||||||||||||||||||||||:|||:|||||||||||||||||
Db        296 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDLSQIMFIYFNSFLQSFQGFFV 355

Qy        358 SVFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||| ||||||| |||||||||||||| :|||||||||||||||||||||||
Db        356 SVFYCFFNGEVRSAVRKRWHRWQDHHSLRVPMARAMSIPTSPTRISFHSIKQTAAV 411


RESULT 8
ADO29267
ID   ADO29267 standard; protein; 411 AA.
XX
AC   ADO29267;
XX
```

DT 29-JUL-2004 (first entry)
XX
DE Human GPCR CRHR2, SEQ ID NO:368.
XX
KW G protein-coupled receptor; GPCR; drug screening; diagnosis;
KW transgenic mouse; neurological disorder; adrenal gland disorder;
KW colon disorder; intestinal disorder; cardiovascular disorder;
KW muscular disorder; blood disorder; immune disorder; bone disorder;
KW joint disorder; metabolic disorder; nutritive disorder; cancer;
KW kidney disorder; liver disorder; lung disorder; breast disorder;
KW ovary disorder; uterus disorder; prostate disorder; testis disorder;
KW skin disorder; stomach disorder; pancreas disorder; spleen disorder;
KW thymus disorder; thyroid disorder; antiparkinsonian; antimanic;
KW cytostatic; antiinflammatory; vasotropic; antianginal; antiarrhythmic;
KW CNS; central nervous system; respiratory; antidiarrhoeic; antidiabetic;
KW virucide; hepatotropic; antibacterial; antianaemic; antiseborrhoeic;
KW dermatological; antiulcer; antithyroid; antiallergic; anorectic;
KW immunosuppressive; nephrotropic; gene therapy; GPCR modulator; human;
KW receptor.
XX
OS Homo sapiens.
XX
PN WO2004040000-A2.
XX
PD 13-MAY-2004.
XX
PF 09-SEP-2003; 2003WO-US028226.
XX
PR 09-SEP-2002; 2002US-0409303P.
PR 09-APR-2003; 2003US-0461329P.
XX
PA (PRIM-) PRIMAL INC.
XX
PI Gaitanaris GA, Bergmann JE, Gragerov A, Hohmann J, Li F;
PI Madisen L, Mcilwain KL, Pavlova MN, Vassilatis D, Zeng H;
XX
DR WPI; 2004-390329/36.
DR N-PSDB; ADO29852.
XX
PT Novel mammalian G protein coupled receptors, useful for identifying
PT compounds that modulates diagnosing and treating disease condition
PT associated with GPCR dysfunction e.g. autoimmune diseases, angina
PT pectoris, Parkinson's disease.
XX
PS Claim 151; SEQ ID NO 368; 542pp; English.
XX
CC The invention relates to human and mouse G protein-coupled receptors
CC (GPCRs) and nucleic acids encoding them. The invention also relates to
CC sequences at least 90% identical to the GPCR proteins and nucleic acids
CC of the invention; methods of treating, preventing or diagnosing diseases
CC associated with GPCRs of the invention; methods of screening for
CC compounds useful in the treatment of GPCR-related diseases; a transgenic
CC mouse comprising a GPCR gene of the invention; a mouse comprising a
CC mutation in a GPCR transgene or in an endogenous GPCR gene; cells derived
CC from the trasngenic mice; kits comprising several mice, each of which has
CC a mutation in a different GPCR gene of the invention; and kits comprising
CC probes which hybridise to GPCR polynucleotides of the invention. The
CC invention further discloses variants of the GPCR polypeptides and vectors
CC comprising a GPCR nucleic acid. The GPCR nucleic acids and proteins may
CC be used in the diagnosis, treatment or prevention of a wide variety of
CC diseases including neurological disorders (e.g., Alzheimer's disease,
CC depression, diabetic neuropathy, Parkinson's disease or schizophrenia);
CC disorders of the adrenal gland; disorders of the colon or intestine
CC (e.g., Crohn's disease, diarrhoea, food poisoning or irritable bowel
CC syndrome); cardiovascular disorders (e.g., angina, cardiac arrhythmia or
CC myocardial infarction); muscular disorders; blood disorders (e.g.,
CC anaemia or leukaemia); immune disorders (e.g., autoimmune disorders or
CC AIDS); bone and joint disorders (e.g., osteoarthritis, rheumatoid
CC arthritis, gout or osteoporosis); metabolic or nutritive disorders (e.g.,
CC obesity, enzyme deficiency-related diseases or vitamin deficiency-related
CC diseases); and disorders of the kidney, liver, lung, breast, ovary,
CC uterus, prostate, testis, skin, stomach, pancreas, spleen, thymus and
CC thyroid (e.g., cancers). The present sequence represents a GPCR of the
CC invention. Note: The full sequence data for this patent did not form part
CC of the printed specification; those sequences not shown were obtained in
CC electronic format directly from WIPO at
CC ftp.wipo.int/pub/published_pct_sequences.
XX
SQ Sequence 411 AA;

Query Match 80.9%; Score 1804; DB 8; Length 411;
Best Local Similarity 80.0%; Pred. No. 8.3e-174;
Matches 333; Conservative 33; Mismatches 42; Indels 8; Gaps 4;

Qy 1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGP--YCSATIDQIGTCWPRSL 58
Db 1 MDAALLHSLL---EANCSL--ALAEELLLDGWGPPLDPEGPYSYCNTTLDQIGTCWPRSA 55

Qy 59 AGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNK-RKYALHYKI 117
Db 56 AGALVERPCPEYFNGVKYNTTRNAYRECLENGTWASKINYSQCEPILDDKQRKYDLHYRI 115

Qy 118 ALIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHN 177
Db 116 ALVVNYLGHCVSVAALVAAFLLFLALRSIRCLRNVIHWNLITTFILRNVMWFLLQLVDHE 175

Qy 178 IHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIP 237
Db 176 VHESNEVWCRCITTIFNYFVVTNFFWMFVEGCYLHTAIVMTYSTERLRKCLFLFIGWCIP 235

Qy 238 SPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLR 297
Db 236 FPIIVAWAIGKLYYENEQCWFGKEPGDLVDYIYQGPIILVLLINFVFLFNIVRILMTKLR 295

Qy 298 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFV 357
Db 296 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDLSQIMFIYFNSFLQSFQGFFV 355

Qy 358 SVFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
Db 356 SVFYCFFNGEVRSAVRKRWHRWQDHHSLRVPMARAMSIPTSPTRISFHSIKQTAAV 411

RESULT 9
AAR90576
ID AAR90576 standard; protein; 411 AA.
XX
AC AAR90576;
XX
DT 08-APR-1996 (first entry)
XX
DE Human CRF2 receptor.
XX
KW CRF2 receptor; corticotropin-releasing factor-2 receptor;
KW cerebrovascular disorder; memory disorder; Alzheimer disease.
XX
OS Homo sapiens.
XX
PN WO9534651-A2.
XX
PD 21-DEC-1995.
XX
PF 14-JUN-1995; 95WO-US007757.
XX
PR 14-JUN-1994; 94US-00259959.
PR 31-JAN-1995; 95US-00381433.
PR 07-JUN-1995; 95US-00485984.
XX
PA (NEUR-) NEUROCRINE BIOSCIENCES INC.
XX
PI Chalmers D, Lovenberg TW, Oltersdorf T, Liaw CW, Grigoriadis DE;
PI De Souza EB;
XX
DR WPI; 1996-049680/05.
DR N-PSDB; AAT12247.
XX

PT Corticotropin-releasing factor-2 receptor, and DNA encoding it - used to
PT isolate CRF-2 receptor antagonists for the treatment of cerebrovascular
PT disorders, memory disorders and Alzheimer's disease.
XX
PS Disclosure; Page 80-82; 109pp; English.
XX
CC Human corticotropin-releasing factor-2 (CRF2) receptor (AAR90576) is a
CC membrane-bound G-coupled protein receptor involved in signal
CC transduction. It can be produced by expression of encoding cDNA
CC (AAT12247) in procaryotic or eucaryotic host cells. Recombinant CRF2
CC receptor is used to screen CRF2 receptor agonists and antagonists of
CC therapeutic appln., and to prepare antibodies which specifically bind to
CC CRF2 receptors.
XX
SQ Sequence 411 AA;

Query Match 80.7%; Score 1799; DB 2; Length 411;
Best Local Similarity 79.8%; Pred. No. 2.7e-173;
Matches 332; Conservative 33; Mismatches 43; Indels 8; Gaps 4;

```
Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGP--YCSATIDQIGTCWPRSL 58
              ||: :   ::   :|||||  |  :  |          |||  ||: |:||||||||||
Db          1 MDAALLHSLL---EANCSL--ALAEELLLDGWGPPLDPEGPYSYCNTTLDQIGTCWPRSA 55

Qy         59 AGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNK-RKYALHYKI 117
              || |||||||: |||::|||||| |||| ||||||| :|||| ||||:| ||| |||:|
Db         56 AGALVERPCPEYFNGVKYNTTRNAYRECLENGTWASKINYSQCEPILDDKQRKYDLHYRI 115

Qy        118 ALIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHN 177
              ||::||||||:|: ||| |||||| |||||||||:|||||||||||||:||||||::||
Db        116 ALVVNYLGHCVSVAALVAAFLLFLALRSIRCLRNVIHWNLITTFILRNVMWFLLQLVDHE 175

Qy        178 IHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIP 237
              :|||||||| |||||:|||||||||||||||||||||||||::||| :|||||||||
Db        176 VHESNEVWCHCITTIFNYFVVTNFFWMFVEGCYLHTAIVMTYSTERLRKCLFLFIGWCIP 235

Qy        238 SPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLR 297
              |||| ||| ||:|||||| |||||  :|||||| :|||||||||||||||||||||||
Db        236 FPIIVAWAIGKLYYENEQCWFGKEPGDLVDYIYQGPIILVLLINFVFLFNIVRILMTKLR 295

Qy        298 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFV 357
              |||||||||||||||||||||||||||||||||||:|||:||||||||||||||||||
Db        296 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDLSQIMFIYFNSFLQSFQGFFV 355

Qy        358 SVFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||| ||||||| |||||||||||||| :|||||||||||||||||||||||||
Db        356 SVFYCFFNGEVRSAVRKRWHRWQDHHSLRVPMARAMSIPTSPTRISFHSIKQTAAV 411
```

RESULT 10
AAO19424
ID AAO19424 standard; protein; 411 AA.
XX
AC AAO19424;
XX
DT 10-DEC-2002 (first entry)
XX
DE Human corticotrophin releasing factor receptor CRF2Ralpha.
XX
KW Human; rat; mouse; sheep; cow; chicken; CRF1R; CRF2R;
KW skeletal muscle atrophy; corticotrophin releasing factor-2 receptor;
KW muscular dystrophy; corticotrophin releasing factor-1 receptor;
KW gene therapy.
XX
OS Homo sapiens.
XX
PN WO200269908-A2.
XX
PD 12-SEP-2002.
XX
PF 06-MAR-2002; 2002WO-US007476.
XX
PR 06-MAR-2001; 2001US-00799978.
XX
PA (PROC) PROCTER & GAMBLE CO.
XX
PI Isfort RJ, Sheldon RJ;
XX
DR WPI; 2002-713413/77.
DR N-PSDB; AAL49975.
XX
PT Identifying candidate compounds for regulating skeletal muscle mass or
PT treating skeletal muscle atrophy by identifying test compounds that bind
PT to, or activate, the corticotropin releasing factor-2 receptor.
XX
PS Claim 7; Page 95-97; 167pp; English.
XX
CC The present invention relates to a method of identifying candidate
CC compounds for regulating skeletal muscle mass or function, and comprises
CC contacting a test compound with a corticotropin releasing factor-2
CC receptor (CRF2R) or with a cell expressing a functional CRF2R,
CC determining whether the test compound binds to, or activates, the CRF2R
CC and identifying the test compounds that bind to, or activates, the CRF2R
CC as candidate compounds for regulating skeletal muscle mass or function.
CC The method is useful for preparing a medicament for treating skeletal
CC muscle atrophy or for prophylactic treatment of muscular dystrophies. The
CC present sequence is a corticotrophin releasing factor receptor
XX
SQ Sequence 411 AA;

Query Match 80.7%; Score 1799; DB 5; Length 411;
Best Local Similarity 79.8%; Pred. No. 2.7e-173;
Matches 332; Conservative 33; Mismatches 43; Indels 8; Gaps 4;

```
Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGP--YCSATIDQIGTCWPRSL 58
              ||: :   ::   :|||||  |  :  |          |||  ||: |:||||||||||
Db          1 MDAALLHSLL---EANCSL--ALAEELLLDGWGPPLDPEGPYSYCNTTLDQIGTCWPRSA 55

Qy         59 AGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNK-RKYALHYKI 117
              || |||||||: |||::|||||| |||| ||||||| :|||| ||||:| ||| |||:|
Db         56 AGALVERPCPEYFNGVKYNTTRNAYRECLENGTWASKINYSQCEPILDDKQRKYDLHYRI 115

Qy        118 ALIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHN 177
              ||::||||||:|: ||| |||||| |||||||||:|||||||||||||:||||||::||
Db        116 ALVVNYLGHCVSVAALVAAFLLFLALRSIRCLRNVIHWNLITTFILRNVMWFLLQLVDHE 175

Qy        178 IHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIP 237
              :|||||||| |||||:|||||||||||||||||||||||||::||| :|||||||||
Db        176 VHESNEVWCHCITTIFNYFVVTNFFWMFVEGCYLHTAIVMTYSTERLRKCLFLFIGWCIP 235

Qy        238 SPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLR 297
              |||| ||| ||:|||||| |||||  :|||||| :|||||||||||||||||||||||
Db        236 FPIIVAWAIGKLYYENEQCWFGKEPGDLVDYIYQGPIILVLLINFVFLFNIVRILMTKLR 295

Qy        298 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFV 357
              |||||||||||||||||||||||||||||||||||:|||:||||||||||||||||||
Db        296 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDLSQIMFIYFNSFLQSFQGFFV 355

Qy        358 SVFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||| ||||||| |||||||||||||| :|||||||||||||||||||||||||
Db        356 SVFYCFFNGEVRSAVRKRWHRWQDHHSLRVPMARAMSIPTSPTRISFHSIKQTAAV 411
```

RESULT 11
ABP81806
ID ABP81806 standard; protein; 411 AA.
XX
AC ABP81806;
XX
DT 04-MAR-2003 (first entry)
XX
DE Human corticotropin releasing factor receptor 2 protein SEQ ID NO:96.
XX
KW G protein-coupled receptor; GPCR; antigenic peptide; gene therapy;
KW G protein-coupled receptor modulator; antibody; immune-related disease;
KW growth-related disease; cell regeneration-related disease; AIDS; cancer;

```
KW   immunological-related cell proliferative disease; autoimmune disease;
KW   Alzheimer's disease; atherosclerosis; infection; osteoarthritis; allergy;
KW   osteoporosis; cardiomyopathy; inflammation; Crohn's disease; diabetes;
KW   graft versus host disease; Parkinson's disease; multiple sclerosis; pain;
KW   psoriasis; anxiety; depression; schizophrenia; dementia; memory loss;
KW   mental retardation; epilepsy; asthma; tuberculosis; obesity; nausea;
KW   hypertension; hypotension; renal disorder; rheumatoid arthritis; trauma;
KW   ulcer.
XX
OS   Homo sapiens.
XX
PN   WO200261087-A2.
XX
PD   08-AUG-2002.
XX
PF   19-DEC-2001; 2001WO-US050107.
XX
PR   19-DEC-2000; 2000US-0257144P.
XX
PA   (LIFE-) LIFESPAN BIOSCIENCES INC.
XX
PI   Burmer GC,  Roush CL,  Brown JP;
XX
DR   WPI; 2003-046718/04.
DR   N-PSDB; ABZ42652.
XX
PT   New isolated antigenic peptides e.g., for G protein-coupled receptors
PT   (GPCR), useful for diagnosing and designing drugs for treating conditions
PT   in which GPCRs are involved, e.g. AIDS, Alzheimer's disease, cancer or
PT   autoimmune diseases.
XX
PS   Disclosure; Fig 1; 523pp; English.
XX
CC   The present invention describes antigenic peptides (I) comprising: (a)
CC   any one of 1601 sequences (see ABP82019 to ABP83619) of 12-24 amino
CC   acids. Also described: (1) an assay for the detection of a particular G
CC   protein-coupled receptor (GPCR) or a candidate polypeptide in a sample;
CC   and (2) an isolated antibody having high specificity and high affinity or
CC   avidity for a particular GPCR. (I) can be used as GPCR modulators and in
CC   gene therapy. The antigenic peptides for GPCRs are useful in detecting an
CC   antibody against a particular GPCR, and in the production of specific
CC   antibodies. The peptides and antibodies are also useful for detecting the
CC   presence or absence of corresponding GPCRs. The antigenic peptides for
CC   GPCRs and antibodies are useful for diagnosing and designing drugs for
CC   treating immune-related diseases, growth-related diseases, cell
CC   regeneration-related disease, immunological-related cell proliferative
CC   diseases, or autoimmune diseases, e.g. AIDS, Alzheimer's disease,
CC   atherosclerosis, bacterial, fungal, protozoan or viral infections,
CC   osteoarthritis, osteoporosis, cancer, cardiomyopathy, chronic and acute
CC   inflammation, allergies, Crohn's disease, diabetes, graft versus host
CC   disease, Parkinson's disease, multiple sclerosis, pain, psoriasis,
CC   anxiety, depression, schizophrenia, dementia, mental retardation, memory
CC   loss, epilepsy, asthma, tuberculosis, obesity, nausea, hypertension,
CC   hypotension, renal disorders, rheumatoid arthritis, trauma, ulcers, or
CC   any other disorder in which GPCRs are involved. The antibodies may be
CC   used in immunoassays and immunodiagnosis. ABZ42523 to ABZ42869 encode
CC   GPCR proteins given in ABP81675 to ABP82018, which are used in the
CC   exemplification of the present invention
XX
SQ   Sequence 411 AA;

  Query Match             80.7%;  Score 1799;  DB 6;  Length 411;
  Best Local Similarity   79.8%;  Pred. No. 2.7e-173;
  Matches  332;  Conservative   33;  Mismatches   43;  Indels    8;  Gaps    4;

Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGP--YCSATIDQIGTCWPRSL 58
              ||: :   ::   :|||||  |  :  |          |||  ||: |:||||||||||
Db          1 MDAALLHSLL---EANCSL--ALAEELLLDGWGPPLDPEGPYSYCNTTLDQIGTCWPRSA 55

Qy         59 AGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNK-RKYALHYKI 117
              || |||||||: |||::|||||| |||| ||||||| :||||| ||||:| ||| |||:|
Db         56 AGALVERPCPEYFNGVKYNTTRNAYRECLENGTWASKINYSQCEPILDDKQRKYDLHYRI 115

Qy        118 ALIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHN 177
              ||::||||||:|: ||| |||||| |||||||||:|||||||||||||:||||||::||
Db        116 ALVVNYLGHCVSVAALVAAFLLFLALRSIRCLRNVIHWNLITTFILRNVMWFLLQLVDHE 175

Qy        178 IHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIP 237
              :|||||||| |||||:|||||||||||||||||||||||||::||| :|||||||||
Db        176 VHESNEVWCHCITTIFNYFVVTNFFWMFVEGCYLHTAIVMTYSTERLRKCLFLFIGWCIP 235

Qy        238 SPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLR 297
              |||| ||| ||:||||||| |||||  :|||||| :|||||||||||||||||||||||
Db        236 FPIIVAWAIGKLYYENEQCWFGKEPGDLVDYIYQGPIILVLLINFVFLFNIVRILMTKLR 295

Qy        298 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFV 357
              |||||||||||||||||||||||||||||||||||||||||:|||:|||||||||||||
Db        296 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDLSQIMFIYFNSFLQSFQGFFV 355

Qy        358 SVFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||| ||||||| |||||||||||||| :|||||||||||||||||||||||
Db        356 SVFYCFFNGEVRSAVRKRWHRWQDHHSLRVPMARAMSIPTSPTRISFHSIKQTAAV 411
```

```
RESULT 12
ADO50791
ID   ADO50791 standard; protein; 411 AA.
XX
AC   ADO50791;
XX
DT   12-AUG-2004  (first entry)
XX
DE   Human corticotropin releasing factor receptor 2 alpha.
XX
KW   Human; receptor; corticotropin releasing factor receptor; CRF1R; CRF2R;
KW   skeletal muscle; muscle atrophy; skeletal muscle dystrophy;
KW   skeletal muscle hypertrophy; surgery; bed rest; broken bone;
KW   infectious disease; AIDS cachexia.
XX
OS   Homo sapiens.
XX
PN   US2004101911-A1.
XX
PD   27-MAY-2004.
XX
PF   27-AUG-2003; 2003US-00649852.
XX
PR   06-MAR-2001; 2001US-00799978.
XX
PA   (PROC ) PROCTER & GAMBLE CO.
XX
PI   Isfort RJ,  Sheldon RJ;
XX
DR   WPI; 2004-459890/43.
DR   N-PSDB; ADO50790.
XX
PT   Identifying compounds for regulating skeletal muscle mass or function, by
PT   contacting test compound with vertebrate corticotropin releasing factor2
PT   receptors (CRF2R), selecting compounds that bind or activate CRF2R.
XX
PS   Claim 3; SEQ ID NO 10; 100pp; English.
XX
CC   The invention relates to identifying candidate compounds for regulating
CC   skeletal muscle mass or function, comprising contacting a test compound
CC   with vertebrate corticotropin releasing factor 2 receptors (CRF 2 R),
CC   determining if the compound binds to or activates CRF2R, selecting
CC   compounds that bind or activate CRF 2 R, and determining if compound
CC   increases muscle mass or function in muscle atrophy model. Also included
CC   are identifying candidate therapeutic compounds from a group of one or
CC   more candidate compounds which have been previously determined to bind to
CC   or activate a vertebrate CRF 2 R (comprising administering the candidate
CC   compound to a non-human animal and determining whether the candidate
CC   compound regulates skeletal muscle mass or function in the treated
CC   animal), increasing skeletal muscle mass or function in a subject in
CC   which such an increase is desirable (comprising identifying a subject in
CC   which an increase in muscle mass or function is desirable and
```

CC administering to the subject a safe and effective amount of a CRF 2 R
CC agonist), a purified antibody specific for a CRF2R (where the antibody is
CC a chimaeric or human antibody), and a pharmaceutical composition
CC comprising a safe and effective amount of a CRF2R agonist and carrier.
CC The methods are useful for identifying candidate compounds for regulating
CC skeletal muscle mass or function, for increasing skeletal muscle mass or
CC function (in a subject in which an increase is desirable), for
CC identifying candidate compounds that are potentially useful in the
CC treatment of skeletal muscle dystrophy and for identifying compounds that
CC prolong or augment the agonist-induced activation of CRF2R or of a CRF2R
CC signal transduction pathway. The compound is useful for treating skeletal
CC muscle hypertrophy and for modulating skeletal muscle atrophy induced by
CC e.g. surgery, bed rest, broken bones, infectious disease or AIDS
CC cachexia. The present sequence represents a corticotropin releasing
CC factor receptor.
XX
SQ Sequence 411 AA;

Query Match 80.7%; Score 1799; DB 8; Length 411;
Best Local Similarity 79.8%; Pred. No. 2.7e-173;
Matches 332; Conservative 33; Mismatches 43; Indels 8; Gaps 4;

```
Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGP--YCSATIDQIGTCWPRSL 58
              ||: :   ::   :|||||  |  :  |          |||  ||: |:||||||||||
Db          1 MDAALLHSLL---EANCSL--ALAEELLLDGWGPPLDPEGPYSYCNTTLDQIGTCWPRSA 55

Qy         59 AGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNK-RKYALHYKI 117
              || |||||||: |||::|||||| |||| ||||||| :||||| ||||:| ||| |||:|
Db         56 AGALVERPCPEYFNGVKYNTTRNAYRECLENGTWASKINYSQCEPILDDKQRKYDLHYRI 115

Qy        118 ALIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHN 177
              ||::||||||:|: ||| |||||| |||||||||:|||||||||||||:||||||::||
Db        116 ALVVNYLGHCVSVAALVAAFLLFLALRSIRCLRNVIHWNLITTFILRNVMWFLLQLVDHE 175

Qy        178 IHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIP 237
              :|||||||| |||||:|||||||||||||||||||||||||||::||| :|||||||||
Db        176 VHESNEVWCHCITTIFNYFVVTNFFWMFVEGCYLHTAIVMTYSTERLRKCLFLFIGWCIP 235

Qy        238 SPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLR 297
               |||| ||| ||:|||||| |||||  :|||||| :|||||||||||||||||||||||
Db        236 FPIIVAWAIGKLYYENEQCWFGKEPGDLVDYIYQGPIILVLLINFVFLFNIVRILMTKLR 295

Qy        298 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFV 357
              ||||||||||||||||||||||||||||||||||||||:|||:|||||||||||||||||
Db        296 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDLSQIMFIYFNSFLQSFQGFFV 355

Qy        358 SVFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||| ||||||| |||||||||||||| :|||||||||||||||||||||||||
Db        356 SVFYCFFNGEVRSAVRKRWHRWQDHHSLRVPMARAMSIPTSPTRISFHSIKQTAAV 411
```

RESULT 13
ADQ89168
ID ADQ89168 standard; protein; 411 AA.
XX
AC ADQ89168;
XX
DT 21-OCT-2004 (first entry)
XX
DE Human urological disorder related protein 2543 SEQ:120.
XX
KW urological disorder; uropathic; cytostatic; urinary incontinence;
KW benign prostatic hyperplasia; human.
XX
OS Homo sapiens.
XX
PN WO2004065576-A2.
XX
PD 05-AUG-2004.
XX
PF 14-JAN-2004; 2004WO-US000750.
XX
PR 15-JAN-2003; 2003US-0440318P.
PR 04-FEB-2003; 2003US-0444783P.
PR 27-MAR-2003; 2003US-0457901P.
PR 08-MAY-2003; 2003US-0468775P.
PR 19-MAY-2003; 2003US-0471614P.
PR 16-JUN-2003; 2003US-0478742P.
PR 18-JUL-2003; 2003US-0488529P.
PR 30-JUL-2003; 2003US-0491156P.
PR 02-SEP-2003; 2003US-0499594P.
PR 26-SEP-2003; 2003US-0506332P.
XX
PA (MILL-) MILLENNIUM PHARM INC.
XX
PI Karicheti V, Silos-Santiago I, Eliasof SD;
XX
DR WPI; 2004-562167/54.
DR N-PSDB; ADQ89167.
XX
PT Use of polypeptides related to urological disorders, e.g. 44390, 54181,
PT 211 or for identifying a compound capable of treating a urological
PT disorder or identifying and treating a subject having a urological
PT disorder.
XX
PS Claim 1; SEQ ID NO 120; 542pp; English.
XX
CC The present invention describes the use of polypeptides related to
CC urological disorders for identifying a compound capable of treating a
CC urological disorder, identifying a subject having a urological disorder,
CC or treating a subject having a urological disorder. Also described: (1) a
CC method for identifying a compound capable of treating a urological
CC disorder; (2) a method for identifying a subject having a urological
CC disorder; and (3) a method for treating a subject having a urological
CC disorder. The compound has uropathic and cytostatic activities. The
CC polypeptides related to urological disorders are useful for identifying a
CC compound capable of treating a urological disorder, identifying a subject
CC having a urological disorder, or treating a subject having a urological
CC disorder. Disorders include urinary incontinence and benign prostatic
CC hyperplasia. The present sequence represents a human urological disorder
CC related protein, which is used in the exemplification of the present
CC invention.
XX
SQ Sequence 411 AA;

Query Match 80.7%; Score 1799; DB 8; Length 411;
Best Local Similarity 79.8%; Pred. No. 2.7e-173;
Matches 332; Conservative 33; Mismatches 43; Indels 8; Gaps 4;

```
Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGP--YCSATIDQIGTCWPRSL 58
              ||: :   ::   :|||||  |  :  |          |||  ||: |:||||||||||
Db          1 MDAALLHSLL---EANCSL--ALAEELLLDGWGPPLDPEGPYSYCNTTLDQIGTCWPRSA 55

Qy         59 AGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNK-RKYALHYKI 117
              || |||||||: |||::|||||| |||| ||||||| :||||| ||||:| ||| |||:|
Db         56 AGALVERPCPEYFNGVKYNTTRNAYRECLENGTWASKINYSQCEPILDDKQRKYDLHYRI 115

Qy        118 ALIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHN 177
              ||::||||||:|: ||| |||||| |||||||||:|||||||||||||:||||||::||
Db        116 ALVVNYLGHCVSVAALVAAFLLFLALRSIRCLRNVIHWNLITTFILRNVMWFLLQLVDHE 175

Qy        178 IHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIP 237
              :|||||||| |||||:|||||||||||||||||||||||||||::||| :|||||||||
Db        176 VHESNEVWCHCITTIFNYFVVTNFFWMFVEGCYLHTAIVMTYSTERLRKCLFLFIGWCIP 235

Qy        238 SPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLR 297
               |||| ||| ||:|||||| |||||  :|||||| :|||||||||||||||||||||||
Db        236 FPIIVAWAIGKLYYENEQCWFGKEPGDLVDYIYQGPIILVLLINFVFLFNIVRILMTKLR 295

Qy        298 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFV 357
              ||||||||||||||||||||||||||||||||||||||:|||:|||||||||||||||||
Db        296 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDLSQIMFIYFNSFLQSFQGFFV 355

Qy        358 SVFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||| ||||||| |||||||||||||| :|||||||||||||||||||||||||
Db        356 SVFYCFFNGEVRSAVRKRWHRWQDHHSLRVPMARAMSIPTSPTRISFHSIKQTAAV 411
```

```
RESULT 14
ABU62363
ID   ABU62363 standard; protein; 411 AA.
XX
AC   ABU62363;
XX
DT   29-AUG-2003  (first entry)
XX
DE   Rat corticotropin release factor receptor, rCRF-R2alpha.
XX
KW   Corticotropin release factor; receptor; adrenocorticotrophic hormone;
KW   ACTH; blood flow; blood pressure; vascular bed; coronary blood flow;
KW   inflammation; vascular permeability; CRF-binding protein; parturition;
KW   Alzheimer's disease; chronic fatigue syndrome; appetite; alertness; rat;
KW   respiratory system; learning performance; depression; anxiety; memory;
KW   hypothalamic pituitary adrenal function; endocrine disorder; swelling;
KW   central nervous system disorder; CRF; rCRF-R2alpha.
XX
OS   Rattus sp.
XX
PN   US2003032587-A1.
XX
PD   13-FEB-2003.
XX
PF   26-MAR-2001; 2001US-00818009.
XX
PR   13-JUN-1995;   95US-0028444P.
PR   11-AUG-1995;   95US-0002223P.
PR   12-JUN-1996;   96WO-US010240.
PR   10-DEC-1997;   97US-00981189.
XX
PA   (SALK ) SALK INST BIOLOGICAL STUDIES.
XX
PI   Vale WW,  Vaughan J,  Donaldson CJ,  Lewis KA,  Sawchenko P;
PI   Rivier JEF,  Perrin MH;
XX
DR   WPI; 1997-077344/07.
XX
PT   Urocortin peptide(s) related to urotensin and corticotropin-releasing
PT   factor - for increasing ACTH and beta-endorphin levels, lowering blood
PT   pressure and improving mood, memory and learning performance.
XX
PS   Disclosure; Page 27-28; 34pp; English.
XX
CC   The invention relates to a human urocortin (Ucn) peptide or an analogous
CC   sequence having only conservative substitutions to the amino acid
CC   residues in it, or an N-terminally shortened fragment of either which is
CC   biologically active to increase adrenocorticotrophic hormone (ACTH)
CC   production. Human urocortin or its N-terminally shortened antagonist
CC   peptide are useful for modifying blood flow and/or blood pressure and is
CC   further useful for modulating blood flow in a desired vascular bed. Human
CC   urocortin is also useful for increasing coronary blood flow and for
CC   decreasing swelling and/or inflammation and/or vascular permeability. A
CC   CRF-binding protein blocking compound is useful for increasing the in
CC   vivo level of CRF and/or Ucn. The amount of CRF-binding protein blocking
CC   compound is sufficient to promote parturition in a pregnant female. The
CC   amount of the compound administered is effective so as to result in an
CC   increase in free endogenous CRF and/or Ucn in the brain which causes
CC   improvement in short to medium term memory in a subject afflicted with
CC   Alzheimer's disease, relief from chronic fatigue syndrome, suppression of
CC   appetite, stimulation of the respiratory system, improvement in learning
CC   performance, improvement in memory, improvement in alertness, reduction
CC   of depression and/or lessening of anxiety. The compound is administered
CC   so that it reaches the brain. Human urocortin is useful for evaluating
CC   hypothalamic pituitary adrenal function in mammals with suspected
CC   endocrine or central nervous system pathology. Human urocortin antibodies
CC   are useful in diagnostic methods and systems for detecting the level of
CC   Ucn polypeptide, for immunoaffinity or affinity chromatography
CC   purification of Ucn, and also in human therapeutic methods. The present
CC   sequence represents the amino acid sequence of the rat corticotropin
CC   release factor receptor, rCTF-R2alpha
XX
SQ   Sequence 411 AA;

  Query Match             80.4%;  Score 1793;  DB 2;  Length 411;
  Best Local Similarity   80.0%;  Pred. No. 1.1e-172;
  Matches  333;  Conservative   30;  Mismatches   45;  Indels    8;  Gaps    4;

Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGP--YCSATIDQIGTCWPRSL 58
              ||:    :::   :|||||  |  :  |           |||  ||: |:|||||||:|
Db          1 MDAA---LLLSLLEANCSL--ALAEELLLDGWGEPPDPEGPYSYCNTTLDQIGTCWPQSA 55

Qy         59 AGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNK-RKYALHYKI 117
               | |||||||: ||||:|||||| |||| ||||||| :||| | ||||:| ||| |||:|
Db         56 PGALVERPCPEYFNGIKYNTTRNAYRECLENGTWASRINYSHCEPILDDKQRKYDLHYRI 115

Qy        118 ALIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHN 177
              |||||||||:|::||| |||||| |||||||||:|||||||||||||| |||||:|||
Db        116 ALIINYLGHCVSVVALVAAFLLFLVLRSIRCLRNVIHWNLITTFILRNITWFLLQLIDHE 175

Qy        178 IHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIP 237
              :|| |||||||:|||:||||||||||||||||||||||||||: ||||:|||||||||
Db        176 VHEGNEVWCRCVTTIFNYFVVTNFFWMFVEGCYLHTAIVMTYSTEHLRKWLFLFIGWCIP 235

Qy        238 SPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLR 297
              |||| ||: ||:||||||| |||||  :|||||| :|||||||||||||||||||||||
Db        236 CPIIVAWAVGKLYYENEQCWFGKEPGDLVDYIYQGPIILVLLINFVFLFNIVRILMTKLR 295

Qy        298 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFV 357
              |||||||||||||||||||||||||||||||||||||||||:|||||||||||||||||
Db        296 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDLSQIVFIYFNSFLQSFQGFFV 355

Qy        358 SVFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||| ||||||| ||||||||||:||| ||||||||||||||||||||||||
Db        356 SVFYCFFNGEVRSALRKRWHRWQDHHALRVPVARAMSIPTSPTRISFHSIKQTAAV 411


RESULT 15
AAO19428
ID   AAO19428 standard; protein; 411 AA.
XX
AC   AAO19428;
XX
DT   10-DEC-2002  (first entry)
XX
DE   Rat corticotrophin releasing factor receptor CRF2Ralpha.
XX
KW   Human; rat; mouse; sheep; cow; chicken; CRF1R; CRF2R;
KW   skeletal muscle atrophy; corticotrophin releasing factor-2 receptor;
KW   muscular dystrophy; corticotrophin releasing factor-1 receptor;
KW   gene therapy.
XX
OS   Rattus norvegicus.
XX
PN   WO200269908-A2.
XX
PD   12-SEP-2002.
XX
PF   06-MAR-2002; 2002WO-US007476.
XX
PR   06-MAR-2001; 2001US-00799978.
XX
PA   (PROC ) PROCTER & GAMBLE CO.
XX
PI   Isfort RJ,  Sheldon RJ;
XX
DR   WPI; 2002-713413/77.
DR   N-PSDB; AAL49979.
XX
PT   Identifying candidate compounds for regulating skeletal muscle mass or
PT   treating skeletal muscle atrophy by identifying test compounds that bind
PT   to, or activate, the corticotropin releasing factor-2 receptor.
XX
PS   Claim 7; Page 112-113; 167pp; English.
```

XX
CC The present invention relates to a method of identifying candidate
CC compounds for regulating skeletal muscle mass or function, and comprises
CC contacting a test compound with a corticotropin releasing factor-2
CC receptor (CRF2R) or with a cell expressing a functional CRF2R,
CC determining whether the test compound binds to, or activates, the CRF2R
CC and identifying the test compounds that bind to, or activates, the CRF2R
CC as candidate compounds for regulating skeletal muscle mass or function.
CC The method is useful for preparing a medicament for treating skeletal
CC muscle atrophy or for prophylactic treatment of muscular dystrophies. The
CC present sequence is a corticotrophin releasing factor receptor
XX
SQ Sequence 411 AA;

Query Match 80.4%; Score 1793; DB 5; Length 411;
Best Local Similarity 80.0%; Pred. No. 1.1e-172;
Matches 333; Conservative 30; Mismatches 45; Indels 8; Gaps 4;

```
Qy          1 MDSTIFEIIIDEFDANCSLLDAFQDSFLHSESSSFFGFEGP--YCSATIDQIGTCWPRSL 58
              ||:    :::   :|||||  |  :  |          |||  ||: |:|||||||:|
Db          1 MDAA---LLLSLLEANCSL--ALAEELLLDGWGEPPDPEGPYSYCNTTLDQIGTCWPQSA 55

Qy         59 AGELVERPCPDSFNGIRYNTTRNVYRECFENGTWASWMNYSQCVPILDNK-RKYALHYKI 117
               | |||||||: ||||:|||||| |||| ||||||| :||| | ||||:| ||| |||:|
Db         56 PGALVERPCPEYFNGIKYNTTRNAYRECLENGTWASRINYSHCEPILDDKQRKYDLHYRI 115

Qy        118 ALIINYLGHCISILALVIAFLLFLCLRSIRCLRNIIHWNLITTFILRNIMWFLLQMIDHN 177
              ||||||||||:|::||| |||||| |||||||||:|||||||||||||| |||||:|||
Db        116 ALIINYLGHCVSVVALVAAFLLFLVLRSIRCLRNVIHWNLITTFILRNITWFLLQLIDHE 175

Qy        178 IHESNEVWCRCITTIYNYFVVTNFFWMFVEGCYLHTAIVMTYSTDKLRKWVFLFIGWCIP 237
              :|| |||||||:|||:||||||||||||||||||||||||: ||||:|||||||||
Db        176 VHEGNEVWCRCVTTIFNYFVVTNFFWMFVEGCYLHTAIVMTYSTEHLRKWLFLFIGWCIP 235

Qy        238 SPIIVTWAICKLFYENEQCWIGKEPGKYIDYIYQGRVILVLLINFVFLFNIVRILMTKLR 297
               |||| ||: ||:||||||| |||||  :|||||| :|||||||||||||||||||||
Db        236 CPIIVAWAVGKLYYENEQCWFGKEPGDLVDYIYQGPIILVLLINFVFLFNIVRILMTKLR 295

Qy        298 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDVSQIVFIYFNSFLQSFQGFFV 357
              ||||||||||||||||||||||||||||||||||||||:|||||||||||||||||||
Db        296 ASTTSETIQYRKAVKATLVLLPLLGITYMLFFVNPGEDDLSQIVFIYFNSFLQSFQGFFV 355

Qy        358 SVFYCFLNGEVRSAARKRWHRWQDHHSLRVRVARAMSIPTSPTRISFHSIKQTAAV 413
              |||||| ||||||| ||||||||||:||| ||||||||||||||||||||||||||
Db        356 SVFYCFFNGEVRSALRKRWHRWQDHHALRVPVARAMSIPTSPTRISFHSIKQTAAV 411
```

Search completed: August 20, 2005, 00:25:30
Job time : 168 secs